Gregg Mandsager
City Administrator
City Hall, 215 Sycamore St.
Muscatine, IA 52761-3840
(563) 264-1550 Voice/TT

City Administrator Report to Mayor & City Council

November 10, 2016, Edition No. 244

WEEKLY UPDATE:

- City Administrator Annual Evaluation: This closed session is scheduled for Tuesday, November 15th at 5:30pm in the Lower Level Conference Room.
- Riverfront Master Plan: Reminder that the public meeting is scheduled for next Wednesday at 5:30pm at the Riverview Center.
- Hotel: Attached is the draft ground lease and ROW dedication that will be placed on the next council agenda.
- Soccer: Parks & Rec received an estimate of $160,000 to light soccer field #1. This could be added to the CIP, but in talking to the Parks and Recreation Department, they have other priorities throughout their facilities that would take precedence from a staff perspective.
- Solid Waste Collaboration: Brief update - IDNR SWAP funds will not be available, but we are still waiting the Riverboat grant application. Based on the grant, we will be bringing the agreement forward with Baker Lemar to complete to study.
- Northstart Website: Here is the website for the company that is performing the marketing and branding study: http://www.northstarideas.com.a
- Draft Goals: Please see the revised draft goals.
- Stormater: The following is a link to a resource document from Corralville - A new path for stormwater: http://www.coralville.org/DocumentCenter/View/5446. Some good information on their program.
- Form-Based Codes: Please see the attached Flagstaff, Arizona article on form-based codes. They have a hybird code which if form based in the locations where it is most useful, and have an updated the traditional Euclidean code in the rest of the City. City Planner Fangman thinks that this would be the best approach for Muscatine. Attached is an article from the American Planning Association on what Flagstaff has done. Their full zoning ordinance can be hound here. http://www.flagstaff.az.gov/index.aspx?NID=2998. Here is an additional overview of form-based codes: http://formbasedcodes.org/content/uploads/2013/11/CMAP-GuideforCommunities.pdf. Dubuque has had form-based codes in place for a number of years.
- Attached is the November 2016 Commission Packet. The next meeting is scheduled for Wednesday, November 16, 2016.
- MFPRSI: Please find attached the MFPRSI Board Meeting Agenda for the forthcoming meeting on November 17, 2016.

ADDITIONAL INFORMATION

- Mulberry: Attached the Monthly Update for the Mulberry Ave. Reconstruction Project. If you have any questions, please contact me. R. Hill

- Airport: Attached the Monthly Update for the Airport - Runway 6/24 Reconstruction and Associated Taxiways. If you have any questions, please contact me. rhill

- Art Center: Attached an updated Monthly report on the Art Center HVAC Project. If you have any questions please contact me. rhill

- CDBG: Attached is the updated Monthly report for the Alley #1 CDBG Facade Project. I took several photos today and sent them to Emily that can accompany this report. Emily can send them to you. If you have any questions, please contact me. rhill

- CSO: Attached the Monthly Update on the West Hill Storm and Sanitary Sewer Separation Project. The work is progressing according to schedule although the conflicts regarding interpretation of the contract still exist. If you have any questions, please let me know. We continue to work through three cost items/ differences with the contractor. Stanley and the City staff will meet next week to review and discuss.

- Mississippi Drive: Two critical items control the timing of Mississippi Drive. The water and electrical final design from MPW which we are still awaiting. Coordination meetings continue on a regular basis. The other key item is the CP and their cost share for the area of impact from their raising of the tracks. We continue to negotiate the area of impact and associated costs, but this has been difficult given the number of staffing changes at CP (three over the past year). Letting may need pushed to February or as a worst case scenario, the portion in from of the hotel could be let separately and first. We plan to meet next week and have a more detailed updated/recommendation coming forward.

- AARP Livability Fact Sheets: Per AARP - AARP Livable Communities has partnered with the Walkable and Livable Communities Institute to create the AARP Livability Fact Sheet series. A package of comprehensive, easy-to-read, award-winning livability resources, the 11 fact sheets can be used by community leaders, policy makers, citizen activists and others to learn about and explain what makes a city, town or neighborhood a great place for people of all ages. After all, a street that's made safer for an older adult to walk across is safer for a person walking to work, a parent pushing a stroller, a child riding a bicycle to school. Each fact sheet is a four-page PDF document that can be read online or downloaded and printed. We encourage sharing, so please forward the fact sheet URLs or PDFs (individually, below, or as a collection, at right) to colleagues and friends, and use the fact sheets for discussions and research. Topics include: Bicycling, Density, Economic Development, Form-Based Code, Modern Roundabouts, Parking, Revitalization Without Displacement Road Diets, Sidewalks, Street Trees, & Traffic Calming. Here is the link: http://www.aarp.org/livable-communities/

GROUND LEASE OF CITY RIGHT-OF-WAY

The City of Muscatine, Iowa, an Iowa municipal corporation, (hereinafter referred to as "Lessor" or "City") herby agrees to lease to MLC Land Company LLC, an Iowa limited liability company, its successors and assigns, (hereinafter referred to as "Lessee") the following described premises located in the City of Muscatine, Iowa:

INSERT **Legal Description of Leased Property** (the "Premises")

1. Term. The term of this Lease shall be for ninety-nine (99) years, commencing on the 1st day of August, 2016, and terminating on the ninety-ninth (99th) anniversary thereafter, unless sooner terminated by the Lessor or Lessee as hereinafter provided.

2. Rent. Lessee agrees to pay as rent for the Premises the total sum of Fifty Thousand Two Hundred Thirty Dollars ($50,230.00). Such amount shall be paid in one lump sum payment on or before six (6) months from the date the Lessee opens the hotel on the Premises.

3. Premises; Inspections: As Is. It is the responsibility of the Lessee, at the Lessee's sole expense, to satisfy itself, prior to the execution of this Lease, as to the title and condition of the Premises. Accordingly, the taking of possession of the Premises by the Lessee shall be conclusive evidence that the Premises was in satisfactory condition when possession was taken by Lessee.

4. Notices: All notices required by law and by this Lease to be given by one party to the other shall be in writing, and the same may be served by certified mail, return receipt requested, to Lessor, City of Muscatine at 215 Sycamore Street, Muscatine, Iowa 52761, and to Lessee at the address of the Registered Agent shown by the Iowa Secretary of State, or to such other address as Lessor or Lessee may by writing to the other so designate. Notice to Lessee may also be served by personal delivery.

5. Use by Lessee:

5.1. The Lessee shall use the Premises only for the following purpose: Drop off and drive around lane, hotel entrance features, and temporary parking area for the operation and maintenance of the adjoining hotel. The Lessee shall not use or permit the Premises or any part of the Premises to be used for any unauthorized or unlawful purpose, or for any purpose other than as set forth herein.

5.2 Written permission from the City of Muscatine shall be obtained prior to making any permanent improvement to the Premises that is not part of the approved site plan for the hotel as may be amended or modified in accordance with City procedures from time to time (the "Site Plan").

5.3 Construction, repair and replacement of private utilities in, on or under the Premises is permitted as shown on the Site Plan. City agrees to provide separate easement agreements for private utility lines to the extent required by Lessee's mortgagee or any subsequent owner of the hotel property.

5.4 Lessee may also use the Premises for elements of the hotel building that extend into or over the Premises and are shown on the Site Plan, including without limitation construction and maintenance of balcony and awning structures. The Lessee agrees that such elements shall be constructed at no cost to the City, and shall be constructed in a good and workmanlike manner.

5.5 Lessee shall be responsible for the cost of all labor and materials furnished or provided in connection with the construction of the hotel and any elements upon the Premises and shall not permit the filing of any mechanics liens against the Premises, title to which at all times remains in the City. If any lien is filed against the Premises, Lessee must discharge the lien or provide adequate bond or other surety in a manner and amount reasonably satisfactory to the City within thirty (30) days after the filing of the lien.

6. Title to Improvements: Lessee may, at its own expense and only upon written approval by Lessor, make alterations and improvements to the Premises as necessary for the conduct of its business. Lessee shall be owner of any improvements made by Lessee during the lease term. Lessee specifically agrees that any and all improvements, except, equipment and trade fixtures installed, upon the Premises shall become the property of the Lessor upon termination of this Lease, except as otherwise noted in this Lease.

7. Public Utilities:

7.1 The installation and repair of public utilities on the Premises without compensation to the Lessee is authorized, provided that any such installation or repair shall be designed and undertaken in such manner to limit interference with the use and operation of the hotel.

7.2. The Lessee at all times shall permit any utility or its agents to enter into and upon the Premises for the purpose of installing, maintaining, or repairing any public utility infrastructure that has been installed within the Premises, subject to Section 7.1.

8. Lessor's Right of Entry: The Lessee upon 48 hours notice to Lessee (except in the event of emergency) shall permit Lessor or its agents to enter into and upon the Premises for the purpose of inspecting the same.

9. Lessor Obligations: In consideration for this Lease, and Lessee's construction of the adjacent hotel, Lessor agrees:

9.1 To construct the portion of Mississippi Drive directly adjoining the Premises as shown on Exhibit A attached hereto. Construction of Mississippi Drive in manner inconsistent with Exhibit A shall be permitted by mutual written consent.

9.2 To pay before delinquency any real estate taxes on the Premises.

10. Approvals: Except to the extent contrary to the terms of this Lease, nothing in this Lease shall be construed to exempt the Lessee from full compliance with any requirements imposed by the City Code or other applicable laws, rules, and regulations regarding any permits or approvals necessary for the anticipated use of the premises by Lessee, including but not limited to building permits, zoning or conditional use permits as may be legally required. By executing this Agreement, Lessor does not waive any of its regulatory authority over activities occurring on or improvements to the Premises.

11. Maintenance:

11.1 Lessee, at its sole cost and expense, shall maintain, repair, and replace all improvements made by the Lessee on the Premises.

11.2 Lessee, at its sole cost and expense shall at all times keep all portions of the Lessor's property in good order, condition, and repair and in a clean, sanitary, and safe condition and in accordance with any and all applicable laws.

11.3 Lessee shall not cause damage or injury to the Premises, or permit any waste or nuisance on the Premises.

11.4 Lessee is solely responsible for snow removal, mowing and weed control on the Premises.

11.5 In the event the Premises are not maintained as required by this Lease, the City may provide notice to the Lessee as set forth in Section 4 herein, giving the Lessee ten (10) days to cure the deficiencies. In the event Lessee fails to cure within such timeframe, the City may cause the Premises to be maintained and the cost thereof will be billed to Lessee.

12. Parking Spaces: In addition to the Premises set forth above, the Lessor agrees to grant Lessee the right to utilize four (4) parking spaces on Mississippi Drive ("Parking Spaces") for hotel use purposes. The location of such parking spaces is depicted on Exhibit B and

incorporated herein. In the event that Lessee acquires additional on-street parking at any point during the Term of this Lease, the right to use the Parking Spaces shall expire and use shall revert back to Lessor. All other terms of this Lease apply to the Lessee's use of the Parking Spaces.

13. Indemnification: Lessee, solely with respect to its use of the Premises, agrees to indemnify, protect, defend, and hold harmless Lessor, its successors and assigns, and its agents, servants, employees, elected officials, and officers, from any and all loss, damage, liability, cost or expense (including but not limited to, attorneys fees and court costs) and all other sums which Lessor, its successors and assigns, and its agents, servants, employees, elected officials, and officers may incur, be subjected to, or may reasonably pay or become obligated to pay on account of any, all and every demand, claim, or action arising out of any negligent act or omission of Lessee, its agents, servants or employees.

14. Assignment of Lease by Lessee: This Lease and the Premises hereunder are assignable by the Lessee without Lessor's consent to the following: (1) any person or business entity which is a parent, subsidiary or affiliate of Lessee; (2) any person or business entity which controls or is controlled by or under a common control with Lessee; (3) any person or business entity which is merged or consolidated with Lessee; (4) any person or business entity which purchases or acquires ownership in the hotel property; and (5) in connection with any leasehold mortgage or collateral assignment for financing. Any other assignment of this Lease and the Premises hereunder by the Lessee shall not occur without the Lessor's consent, which consent shall not be unreasonably withheld, conditioned or delayed. Lessee shall notify Lessor in writing of the name and address of any assignee or collateral assignee. In the event the Lessee's leasehold mortgagee, its designee or nominee, shall acquire ownership of the leasehold estate, either following foreclosure of such mortgage or by transfer or assignment in lieu of foreclosure, the Lessee's leasehold mortgagee; its designee or nominee, shall have the right, without the consent of Lessor, to further assign this Lease.

15. Insurance: Lessee shall maintain the following insurance coverage:

(a) Comprehensive general liability insurance insuring Lessee against any liability arising out of this Lease, or the use, occupancy, or maintenance of the Premises and all areas appurtenant to the Premises. Such insurance shall be in the amount of not less than Two Million Dollars ($2,000,000.00) per occurrence for property damage, bodily injuries, or deaths of persons occurring in and about the Premises. The insurance policy shall insure the hazards of the Premises and operations conducted in and on the Premises, independent contractors, contractual liability (covering the indemnity included in this Lease), and shall name the City as an additionally insured party.

Any policy issued to the City providing duplicate or similar coverage shall be deemed excess over Lessee's policies. Lessee waives any subrogation rights against the City on all claims and insurance policies. Lessee shall not use or permit the Premises to be used in any manner that would void Lessee's or the City's insurance or increase the insurance risk.

16. Default; Remedies:

16.1 Default. The occurrence of any one or more of the following events, if not timely cured, shall constitute a default on the part of the Lessee:

(1) the Lessee fails to pay when due any rental or any other sum of money payable hereunder on the date due;

(2) the conduct of any business or performance of any acts on the Premises not specifically authorized in the Lease;

(3) the Lessee abandons, deserts or vacates the Premises;

(4) the Lessee sells, assigns, subleases, transfers, or mortgages this Lease except as otherwise permitted;

(5) the Lessee fails to carry the insurance required under this Lease, any insurance required under this Lease is cancelled, terminated, expires, or is reduced or materially changed so as to not comply with this Lease;

(6) the Lessee fails to discharge, by payment or bond, any lien or encumbrance placed upon the Premises or improvements in violation of this Lease; or

(7) the Lessee breaches or fails to comply with any other term, provision, covenant or condition of this Agreement.

Any or all of the foregoing, if not timely cured, shall hereinafter be referred to as "Events of Default". Upon the occurrence of any of the above Events of Default, the Lessor shall give written notice of such default to Lessee at the address set forth in this Lease. The effective date of notice shall be the date that the notice is personally served on the Lessee and deposited in certified U.S. Mail return receipt requested. If the default is for failure to pay rent or any other sum of money when due, then the Lessee shall have sixty (60) days after the effective date of notice to cure. If the default is for any other Event of Default then the Lessee shall have thirty (30) days after the effective date of notice to cure, or if such failure by its nature cannot reasonably be corrected within such 30-day period, then the Lessee shall have a reasonable time after the effective date of notice to cure but in no event longer than one hundred twenty (120) days.

16.2 Remedies: If the Lessee fails to cure the default within the time allowed in Section 16.1, Lessor may at the Lessor's option elect one or more of the following remedies:

(1) without releasing the Lessee from its obligations under this Lease, attempt to cure the default. The City may enter the Premises for such purpose and take such action as it deems desirable or appropriate to cure the default;

(2) sue for payment of the unpaid rents or other payments as they become due;

(3) subject to the terms of Section 16 below, terminate the Lease by giving Lessee and any mortgagee (of which Lessor has actual notice) written notice of termination and work a forfeiture thereof, in which event every covenant, term and condition on the part of the Lessor to be performed, fulfilled and kept, shall terminate as to all purposes whatsoever, and in such event, it shall be lawful for the Lessor to re-enter, repossess and enjoy the Premises and Lessor's interest therein; or

(4) exercise any other right or remedy, legal or equitable, including injunctive relief.

16.3 Expenses: The Lessee shall fully reimburse and compensate the Lessor upon demand for any costs and expenses incurred in connection with any cure, correction or repair undertaken by Lessor, which sums shall be deemed to be additional rent hereunder.

16.4 No Waiver: Lessor's acceptance of payments or other moneys following any event of default hereunder shall not be construed as the Lessor's waiver of such event of default unless the event of default is the delinquency in the payment of the amount accepted. No forbearance by the Lessor of action upon any violation or breach of any of the terms, provision and covenants herein contained shall be deemed or construed to constitute a waiver of the terms, provisions and covenants herein contained. Forbearance by the Lessor to enforce one or more of the remedies herein provided upon an Event of Default shall not be deemed or construed to constitute a waiver of any such remedy.

16.5 Effect on Utility Lines; Easements: Upon termination or expiration of the Lease for any reason, any private utilities constructed on the Premises as permitted under Section 5.3 of this Lease, and any building appurtenances extending onto the Premises as permitted under Section 5.4 of this Lease, shall be permitted to remain as easements on the Premises so long as they remain in good working order, do not endanger public, health, safety or welfare, and do not interfere with necessary improvements to any public infrastructure.

17. Leasehold Mortgagee Rights:

17.1 Mortgagee Notice. In the event Lessor provides notice of default to Lessee pursuant to Section 16, then Lessor shall give like written notice of said default to Lessee's mortgagee or mortgagees appearing as such upon the mortgage records in the office of the Recorder of Muscatine County, Iowa. Thereupon, said mortgagee or mortgagees shall have like opportunity to cure said default within the periods specified above, or if not curable within such time periods, within such longer period of time as shall reasonably be required, provided such mortgagee acts in good faith to correct such default and diligently pursues such correction to completion. Copies of any notices sent to mortgagees hereunder shall be sent to Lessee simultaneously, and notice of such default shall not be deemed to be effective until both Lessee and such mortgagee shall have received such notice.

17.2 Mortgagee Right to Cure. Notwithstanding the above, if Lessor elects to exercise the remedy of termination provided in Section 16 above by giving the written notice required under such section, such notice from Lessor to Lessee and Lessee's mortgagee must state that Lessor is electing to terminate this Lease, and work a forfeiture, and such notice may only be given as permitted above after Lessor's obtaining of a final monetary judgment which remains unsatisfied. Upon receipt of such notice of termination, the mortgagee of Lessee shall have the right (i) to nullify the notice of termination as fully as though no default had occurred by giving Lessor notice within ten (10) days after receipt of Lessor's notice, notice of its intent to cure the default within ten (10) days thereafter, paying all rent and other payments then in default, or (ii) indefinitely postponing the

termination of this Lease, by giving Lessor, within ten (10) days of Lessor's notice of its intent to foreclose its leasehold mortgage, and within ten (10) days thereafter, paying all rent, and other payments in default, and thereafter promptly commencing and proceeding with reasonable diligence to foreclose its leasehold mortgage, meanwhile paying all rent and other payments due under the Lease. Such postponement shall continue until confirmation of the foreclosure sale, whereupon such notice of termination shall be deemed nullified.

17.3 Pick-Up Lease. Lessor agrees, notwithstanding anything herein to the contrary, that in the event of termination of this Lease by reason of a default by Lessee, as provided above, and upon notice from the leasehold mortgagee given within thirty (30) days after the date upon which this Lease terminates, Lessor will enter into a new lease for the Premises with such leasehold mortgagee; or its designee, for the remainder of the term, effective as of the date of termination, at the rent and otherwise upon the same terms and provisions as are herein contained, subject to the same conditions of title that this Lease is subject to on the date of termination and subject to the rights of any parties of possession of any part of the Premises. Notwithstanding the foregoing, it shall be a condition of Lessor's obligation to enter into such a new lease that the leasehold mortgagee, or its designee pay, to Lessor at the time of execution of said new lease all sums due Lessor by reason of Lessee's default in the payment of rent and other sums due hereunder, together with Lessor's costs and expenses incurred in termination of this Lease and in preparing the new lease, including without limitation, attorneys' fees. Upon the execution and delivery of such new lease, the tenant thereunder shall have the same right, title and interest in and to the improvements then on the Premises as Lessee had under this Lease.

18. Lessee Termination of Lease: Lessee may terminate this Lease at any time upon sixty (60) days prior written notice to the Lessor. In the event of termination under this Section, if Lessee is otherwise in compliance with all other terms of this Lease, Lessee will be entitled to receive a refund of the Rent amount equal to the prorated net present value based upon the remaining Term of the Lease.

19. Covenants with the Land: All rights, privileges, benefits and burdens created herein are covenants running with the land, binding upon and inuring to the benefit of Lessor, Lessee and their respective assigns and successors in title.

20. Captions and Governing Law: The captions included herein are for reference only and should not be used in construing any of the terms hereof. This Agreement shall be construed and enforced in accordance with the laws of the State of Iowa.

IN WITNESS WHEREOF, we have hereunto affixed our hands this _____ day of _____, 2016.

One Signature Page Follows

Signature Page – Ground Lease

CITY OF MUSCATINE, IOWA

_____
Diana L. Broderson, Mayor

ATTEST:

_____
Gregg Mandsager, City Clerk

STATE OF IOWA, COUNTY OF MUSCATINE, ss:

On the _____ day of _____, 2016, before me, the undersigned, a Notary Public in and for the State of Iowa, personally appeared DIANA L. BRODERSON and GREGG MANDSAGER, to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk of the City of Muscatine, Iowa, a municipal corporation; that said instrument was signed and contained in the Resolution adopted by the City Council of Muscatine, Iowa, on the __ day of _____, 2016, and the said DIANA L. BRODERSON and GREGG MANDSAGER acknowledged the execution of said instrument to be their voluntary act and deed and the voluntary act and deed of said municipal corporation, by it and by them voluntarily executed.

_____
Notary Public in and for the State of Iowa

MLC LAND COMPANY LLC

By: _____
Name: _____
Title: _____

STATE OF _____, _____ COUNTY, ss:

This record was acknowledged before me on this _____ day of _____, 2016, by _____ as Manager of MLC LAND COMPANY LLC.

_____
Notary Public in and for the State of _____

EXHIBIT A
MISSISSIPPI DRIVE IMPROVEMENTS

EXHIBIT B
RENDERING OF PARKING SPACES

DEDICATION OF RIGHT OF WAY

STATE OF IOWA,
POLK COUNTY, ss:

The undersigned MLC Land Company LLC, an Iowa limited liability company of the City of Des Moines and County of Polk, State of Iowa; do hereby certify that I am/We are the owner(s) in fee simple of all the real estate embraced within the limits of the Dedication & Easement Plat, a part of Block 10 of Original Town in the City of Muscatine, Muscatine County, Iowa, which Plat is hereto attached and by this reference made a part of this dedication.

The undersigned, MLC Land Company LLC, an Iowa limited liability company does (do) further certify and declare that said Plat was made under his/her/their direction, consent and accordance with his/her/their express desire; and, MLC Land Company LLC, an Iowa limited liability company does hereby dedicate the rights-of-way on said Plat to the City of Muscatine, Iowa and to public use forever; and that this Dedication is the free act and deed of the undersigned.

Dated at _____, Iowa this ____ day of _____

By _____

By _____

STATE OF IOWA
COUNTY OF MUSCATINE

On this _____ day of _____, 20____, before me, the undersigned, a Notary Public in and for said State, personally appeared
_____, to me personally known or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

_____
(Sign in Ink)

_____
(Print or Type Name)

Notary Public in and for the State of Iowa
My Commission expires _____

City of Muscatine
DRAFT Goals
Adopted 2016-XX-XX

Long-Term Goals

- Partner with local organizations and governments to combine services or cooperate where feasible and appropriate
- Position the City to address potential shortfalls in revenue due to state and federal mandates and work to leverage local funding with grants
- Work to retain Tax Increment Financing (TIF) as a municipal economic development tool
- Increase community awareness and engagement (Tell Muscatine's story)
- Attract employees that work in Muscatine, but do not live in Muscatine.
- ~~Maintain public safety responsiveness, performance, innovation and engagement~~

Council and Management Agenda 2017-18

Community and Economic Development

- Evaluate areas, programs and opportunities for economic development
  - Industrial Park (South End)
  - Highway 38-61 Industrial Park/Mixed Use Development
  - Additional tax abatement areas
  - Downtown façade program
  - Review additional areas for housing or commercial tax abatement
- Market economic development programs
  - Create and review signage opportunities
  - Work with local banks, real estate companies and others to promote plans and incentives
- Develop Port based upon feasibility study results:
  - Submitted LIFTS Grant: Awarded 2016
  - Feasibility Study: Complete 12/2016
  - Grants 2016/17: USEDA/TIGER, USDOT, & others
  - Permitting 2017
  - Engineering/Design: 2017
  - Tentative Construction: 2018-19
- Begin long-term planning and redevelopment of the "Carver Corner" area
- Adopt policies on public art and communications on city-owned land and rights-of-way.

Housing

- Promote infill opportunities and evaluate opportunities to improve current housing stock (voluntary and involuntary opportunities), including the adoption of a property maintenance code
- Review and redevelop nuisance and city-owned properties
- Conduct a housing demand study (April 2017)
  - Market the study, communicate the need
    - Community presentations - public, banks, real estate agents, developers
    - Web and social media

- Identify public, private and partnership opportunities
- Identify infrastructure needs and code changes to implement study

Programs and Services

- Complete the rewrite of the 1974 Zoning Ordinance
  - First Wave: Currently under legal review, targeted adoption (January/February 2017)
  - Second Wave: Will be comprised of new sign regulations, wind turbine regulations, and updates to all existing zoning districts (Adoption in Fall 2017)
  - Third Wave: Begin work of form based zoning, starting with the Grandview Ave corridor (Late 2017)
  - Develop a youth diversion program for at risk youth in cooperation with the Police Department and County Attorney's Office

~~- Develop an outcomes measurement system to assist in determining the city's funding allocations to human services agencies.~~

Marketing, Communication, and Engagement

- Develop a marketing plan for the City of Muscatine in cooperation with the Greater Muscatine Chamber of Commerce and Industry (GMCCI), Muscatine School District, Muscatine Community College, Unity Point - Trinity Muscatine, Convention and Visitors Bureau (CVB), Community Improvement Action Team (CIAT), and local industry (Budget 2016/17, GMCCI Hires Northstar Fall/Winter 2016)
- Enhance the City's website, expand the use of social media tools for public communication and improve Channel 2 public programming/information
- Participate in the National Citizen Survey (see if, where and how we have "moved the needle") and review the use of online departmental surveys to measure performance and citizen satisfaction (To be reviewed during the budget process)
- Continue communication efforts with a focus on increasing transparency and ease of use. Investigate and develop dashboards (visual metrics) for public, council and staff use (i.e. Opengov.com or internal program)

Continuous Service Improvement (Processes, Technology and Efficiency)

- Improve organizational effectiveness and efficiency
- Bring technology to the field (drive efficiency)
- Work with GMCCI, downtown businesses and residents to create a clean and inviting environment (2017)

Sustainability

- Develop a Sustainable Muscatine program to incorporate community sustainability principles of economic prosperity, environmental integrity and cultural vibrancy into the City Comprehensive Plan. This will integrate public, private and non-profit groups as well as individuals to build sustainability practices into planning, budgeting and operations locally and regionally.

Projects, Programs and Placemaking

- Develop a plan for the renewal of the Local Option Sales Tax continuing its focus on sewer separation and streets
- Infrastructure: Maximize current resources, look for operational efficiencies, focus on preventive and deferred maintenance, and look for “green” initiatives that are feasible and demonstrate long-term benefits.
- Implement CIP with focus on existing infrastructure
- Mississippi Drive (2016-18) and Grandview Avenue (Funding 2019)
  - Preliminary design and public meetings (2015-16)
  - Property acquisition (2016-17)
  - Bid (February or March 2017)
  - Construction (2017-18)
- Explore Placemaking projects – develop and maintain local amenities for residents that attract and retain a quality workforce (aesthetics)
- Combined Sewer Overflow (CSO) (Multiple phases through 2028), Update financial plan in 2017
- City Hall HVAC and building envelope plan
- Riverfront Master Plan (Winter 2016-2017)
- WPCP Receiving Station and Waste to Energy Project
- Library Transition to the new HNI Community Center and Musser Public Library
- Review opportunities for reuse of the “old” Musser Public Library
- Reforestation
- Solid Waste Operations Revew/Evaluation
- Review and discuss options for the Allen Street Storm/Sewer Issues

Going Hybrid

How one city overhauled its zoning code while combining form-based and conventional elements.

By Roger E. Eastman, AICP, with Daniel Parolek and Lisa Wise

Flagstaff, Arizona, entered an exclusive club in November. It is now one of the few cities in the U.S. that have adopted a hybrid zoning ordinance with both form-based components and conventional Euclidean elements as part of a complete code rewrite. "Simplified, streamlined, predictable" raved an editorial in the *Arizona Daily Sun* while praising both the code and the process used to adopt it. Getting the new code adopted wasn't easy, but many city residents think the effort will be repaid in a more efficient, more equitable, and easier-to-use zoning system. The adoption of the new zoning code also caps off a successful public engagement process that has changed the generally negative perception of city planners.

Time for an update

An important first step in approaching a new code was differentiating between what Christopher Leinberger calls "walkable urban" areas from "drivable suburban" areas (*The Option of Urbanism*, Island Press, 2008). By making this distinction, Flagstaff could apply a form-based code in the walkable areas of the city while generally leaving the existing conventional code in place in the drivable suburban areas.

Thus, a new transect-based hybrid code resulted that defaults to promoting and allowing for walkable urbanism while seamlessly incorporating refined yet otherwise conventional Euclidean zoning tools for the drivable suburban areas. Because the regulations for the two different types of areas are not muddled together, the form-based code could be kept intact — and development opportunities could emerge in a manner consistent with the city's general plan.

Flagstaff (pop. 62,000), at an elevation of about 7,000 feet, is the regional hub of northern Arizona. Established as a stop on the early transcontinental railway in 1882 and later Route 66 and Interstate 40, Flagstaff quickly grew as a logging and ranching town, and as a gateway for tourists visiting the Grand Canyon and other national parks and monuments. Residents appreciate the natural beauty of the area and enjoy outdoor pursuits such as hiking, skiing, hunting, fishing, and camping.

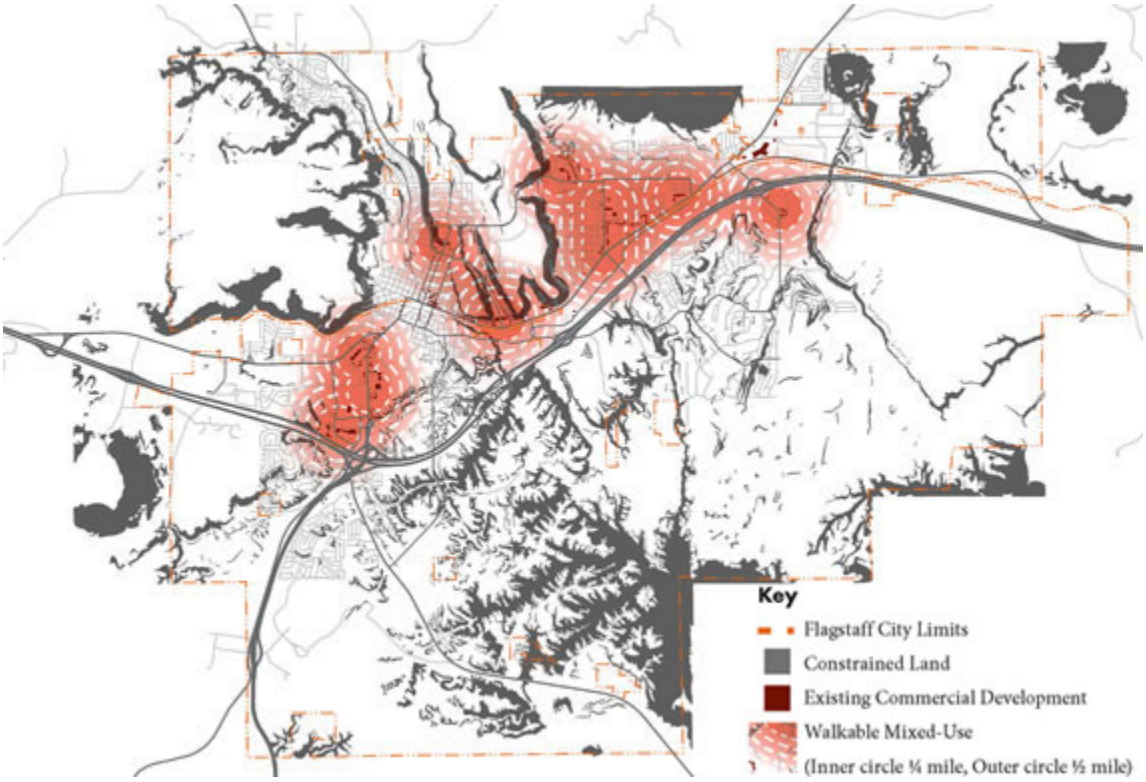
The downtown and oldest neighborhoods were planned with small blocks and lots, and today are valued for their historic buildings and inherently walkable urban character. Typical of many American cities, Flagstaff's urban form changed after World War II as auto-oriented suburban developments were added to the periphery of the city. Until recently Flagstaff's zoning ordinances have actively promoted these driveable suburban development patterns.

The need for a comprehensive update of the city's land development code had been apparent for some time as developers, contractors, design professionals, and residents complained about the code's complexity and inconsistency. Some even blamed the cumbersome nature of the code for contributing to the high cost of development and the failure of big projects and economic development opportunities.

These issues stemmed from piecemeal amendments over the years that reflected numerous, sometimes conflicting zoning methodologies, such as Euclidian zoning provisions dating back to the 1970s and earlier; complex performance-based standards added in 1991 to protect floodplains, steep slopes, and trees, especially the native ponderosa pines; design guidelines adopted in 2002; and traditional neighborhood standards based on the SmartCode developed by consultants Duany Plater-Zyberk and adopted by the city in November 2007.

While the land development code protected resources, it failed to produce the type of urban form intended in the general plan, first adopted in 2001 and now being completely rewritten. Like many codes, this one applied the same suburban parking, landscaping, and urban form regulations to both suburban and urban areas, leading over time to a decline of the walkable, historic core and other historic neighborhoods. In the suburban areas, the code was criticized for allowing "sprawl with trees," because individual trees were protected but healthy forests and wildlife corridors often were not.

To update the code, the city council allocated $500,000 over three budget cycles (later reduced to about $460,000) for consultants. In July 2008, a request for proposals was released nationally, and, following a comprehensive interview process of nine firms, the council in January 2009 awarded a contract to Opticos Design Inc. and its supporting team of consultants (Lisa Wise Consulting, Inc., Sherwood Design Engineers, and Hall Planning and Engineering).



Analyzing the DNA

Considerable time was taken in analyzing the land development code's 34 conventional and performance-based zones to see if they could be combined. At the same time, a comprehensive macro-scale and micro-scale analysis of the city was prepared so that the city's urban form and character (its DNA) could be better understood.

A macro-scale analysis (citywide neighborhoods, districts, and corridors) enabled the team to determine focus areas where walkable urbanism should be reinforced or allowed. This analysis helped the team work with the community to determine the form-based code focus area, which was the main concern of a visioning charrette. The focus area includes the historic downtown and surrounding neighborhoods, which provide the architectural vernacular and DNA that Flagstaff's residents and visitors value. The macro-scale analysis also became a valuable tool to discuss the future framework of the city within the regional planning process that was also in progress.

Once the focus area was established, a detailed micro-scale analysis was completed by city staff and volunteers. The aim was to gain a more fine-grained understanding of the selected area and to calibrate the urban-to-rural transect for Flagstaff.

This review and analysis led to the determination that the new code would be a hybrid one using the structure of a form-based code as the framework while seamlessly incorporating conventional Euclidean zoning tools. One of the challenges was to determine if the supplemental regulations, which apply to the conventional zoning areas, would also need to apply to the form-based code areas.

A thorough assessment of the supplemental standards such as parking, lighting, landscaping, and specific uses was completed to ensure that that they would not compromise the form-based code. It was found that many of these standards are effective in suburban areas but are less applicable in existing or intended urban areas where form-based codes would apply.

Using a NEW code framework

Considerable thought went into creating a new table of contents for a hybrid code that carefully wove together the two systems of zoning germane to Flagstaff. To achieve this goal, the table of contents uses a form-based code framework with certain components (as defined by the Form-Based Codes Institute) defining the primary sections of the document. This organization is what makes the Flagstaff hybrid code so different. Unlike other hybrid approaches in which the FBC is an exception within an otherwise conventional zoning code framework, the Flagstaff code defaults to walkable urbanism and makes drivable suburban development the exception. It is also structured from the broad to the specific, as explained in the table above.

Because of the hybrid form of the code, Chapter 10-50, Supplemental to Zones, took special attention. Each of the regulations in this section were carefully studied and it was determined whether they would apply just to the transect zone areas, just the non-transect zone areas, or both to ensure these standards did not compromise the FBC intent.

The urban-to-rural transect was the organizing principle chosen for the FBC, with T6 being the highest zone that applies to the downtown core. Due to the complexities of applying the transect zones to both existing developed areas and greenfield development, the T3 and T4 transect zones are broken down into T3N.1, T3N.2, T4N.1, and T4N.2.

The T3N.1 and T4N.1 designations apply primarily to existing areas, the T3N.2 and T4N.2 to new neighborhoods. In addition, an "open" classification was added to some transect zones, for example T4N.2-O, to define the areas where the same physical form was intended in a T4N.2 zone, but where a more open or flexible range of uses are allowed.

This definition is appropriate in areas where mixed use main streets transition into neighborhoods. In this application, primarily because of Arizona's Proposition 207 (see sidebar), the transect zones are overlay zones, and their application is optional only within the form-based code focus area, as identified on the zoning map. The Traditional Neighborhood Community Plan Division encourages further application of the FBC for greenfield and infill sites larger than 10 acres.

Analyzing the Table of Contents

	Preamble	Includes an explanation of Flagstaff's different types of places, an introduction to the urban-to-rural transect, and an overview of what a FBC is, and how to use the code.
Chapter 10-10	Title, Purpose, and Jurisdiction	Establishes the purpose of the code and its authority under state law.
Chapter 10-20	Administration, Procedures, and Enforcement	Includes all procedures for the application of the code.
Chapter 10-30	General to All	General requirements that might apply to all zones citywide, including heritage preservation, affordable housing, and site planning design standards.
Chapter 10-40	Specific to Zones	Includes overlay, non-transect, and transect zones, and the standards and uses specific to each zone.
Chapter 10-50	Supplemental to Zones	Specific supplementary regulations, including building types, frontage types, landscaping, sign, resource protection, outdoor lighting, and parking standards.
Chapter 10-60	Specific to Thoroughfares	Establishes standards for thoroughfare design applicable only in the transect zones.
Chapter 10-70	Specific to Civic Spaces	Establishes standards for the design of civic spaces applicable in transect and non-transect zones.
Chapter 10-80	Definitions and Terms and Uses	The terms defined in the code, illustrated as needed.
Chapter 10-90	Maps	Includes all maps referenced in the code.
Appendices		Not adopted into the code, the appendices provide useful supplementary information.

Engaging the community

A hallmark of the project was the reversal of the prevailing attitude of distrust created during the 1991 update of the land development code, when residents complained about insufficient outreach or citizen involvement. The city embarked on an extensive community engagement program that included education and numerous, diverse, and substantive opportunities for the community to provide input. City planning staff was responsible for nearly all of the public outreach and educational efforts (the consultant team managed the design charrette and participated at key milestones). In total, staff hosted and attended more than 320 meetings and events.

The city got it right. A comment provided by a local realtor sums up the success of the public engagement effort: "I was involved with the revisions to the LDC in 1991. That process was heavy handed ... and bitterness lingers to this day. I was skeptical when the current project began, but this has been completely the opposite, with countless hours spent by planning staff reaching out and attending meetings with citizens and groups of citizens. A much better document has resulted."

Even before the project began, city staff had committed to educating interested residents and elected officials on form-based codes, transects zones, and current zoning approaches, establishing a common language and a foundation for a complicated planning effort.

As the project moved forward, the project team included 60 community members (appointed and elected officials, city staff, and others) and managed 11 different citizen focus groups to review specific elements of the LDC and provide direction and suggestions.

A major milestone for the project was a five-day design charrette, the basis for the form-based component of the new zoning code. More than 440 people attended 10 different meetings and the open studio during that week. Dan Parolek, a founding principal of Opticos Design and a contributor to this article, was initially concerned about how the focus groups and individual interests would fit the charrette process, but he later said that "city staff did a brilliant job managing these groups and getting clear direction and support from them."

The staff hosted numerous meetings throughout the project, including educational forums and chapter-by-chapter reviews of the draft. Similar educational sessions were held after the code was adopted. A critical aspect of the outreach effort was staff's attendance at monthly meetings of community groups and organizations such as local realtors, contractors, environmentalists, and the business community, as well as council and city board and commission meetings, and community events.

Other outreach strategies included the development of a simple logo and brand to establish project identity; a webpage; e-newsletters sent to over 5,000 recipients; extensive use of local media, radio interviews, and announcements; free online community bulletin boards; and a free community announcement in pre-movie screenings at local movie theaters. For its outreach efforts, the city won the 2011 Arizona Planning Association's Public Participation Award.

Flagstaff's new zoning code integrates two different zoning systems with up-to-date standards and procedures while coping with the limitations placed on Arizona cities by Proposition 207 (passed in November 2006). The code also includes nationally recognized best practices for sustainable development. A brief overview of some innovations is presented in the table below.

Code Innovations

Residential zones (non-transect) include minimum density requirements and allow for small lot residential development.	**10-40.30.030: Residential Zones**
Both the transect and non-transect zones allow mixed-use development by right, thus promoting more compact, walkable developments and less reliance on the automobile.	**Chapter 10-40: Specific to Zones**
Sustainable development practices are calibrated to the transect for stormwater, water conservation, and energy.	**10-40.40: Transect Zones**
The standards for infill development are more flexible. For example, residential uses are permitted in commercial zones and non-conforming single-family residences in non-residential zones may now be rebuilt in the event of a total loss.	**10-40.30.040: Commercial Zones and Division 10-20.60: Nonconforming Provisions**

Accessory dwelling units are permitted in all zones where residential uses are allowed.	**10-40.30.040: Commercial Zones**
Parking standards are reduced in the transect zones and for mixed-use developments as well as within a quarter mile of public transit. Reductions are also possible if bicycle facilities are present or if trees are protected in parking areas.	**10-50.80: Parking Standards**
The requirements for connectivity of all modes for new developments have been expanded.	**10-30.60: Site Planning Standards**
Density bonuses may be applied to new energy efficient residential developments as measured on the HERS rating system.	**10-30.70: Residential Sustainable Building Standards**
Solar collectors and other sustainable elements are permitted by right and are excluded from building height rules.	**10-50.40: Encroachments**
The revised tree protection standards include flexible standards to assure solar access.	**10-50.90: Resource Protection Standards**
Landscaping standards are based on hydrozones and the installation of native plants to promote water conservation.	**10-50.60: Landscaping Standards**

What we learned

In January 2009, as the nation's economic recession was worsening, the city council decided to continue moving forward on the project rather than reallocating funds for other needs. This difficult decision was justified by the realization that a new zoning code would bring long-term economic benefits to the city.

It is gratifying to realize now that the council was right. In the weeks before the new code's effective date (December 5, 2011), two applicants submitted small residential infill projects for conceptual review, while a third was considering a small mixed use project. All would be reviewed and approved under the new form-based code standards in the T4N.1 transect zone because it offers incentives and advantages not available under the non-transect zone standards.

This complex project taught us many lessons:

- Land-use tables must be different for form-based and transect zones versus conventional zones; the form-based code should be simplified and include some carrots.
- City staff used the SmartCode as a valuable starting point when developing the preexisting Traditional Neighborhood District. Rather than starting over, the consulting team thoughtfully used and modified it to apply it to the complexities of a citywide code. This approach saved a lot of time and helped stretch limited resources.
- It is important to get clear policy direction from elected officials before drafting the code.
- Design guidelines (for building and site planning) are less critical and perhaps unnecessary within areas effectively regulated with form-based codes.

And finally, it is invaluable to train staff in the form-based code approach before starting to overhaul an existing code. In Flagstaff all of the planners, some engineers, and even the city attorney received training from the Form-based Code Institute.

Roger E. Eastman is Flagstaff's Zoning Code Administrator and the project manager for the city's zoning rewrite. Daniel Parolek is a cofounder and principal of Opticos Design Inc., and Lisa Wise is a cofounder and principal with Lisa Wise Consulting, Inc.

Understanding Proposition 207

In November 2006, Arizona voters approved passage of Proposition 207, the Private Property Rights Protection Act. As with Oregon's Proposition 37, enacted in 2004, Arizona's Proposition 207 allows a property owner to seek compensation if any land-use law enacted by a state entity reduces the fair market value of that property.

This statutory provision became a strong determinant of the final form of Flagstaff's new zoning code, and as the planning team and consultants worked through options for combining zones, we were always conscious of the implications of Proposition 207. For example, it was imperative to ensure that if a development standard — such as setback dimension — was different between two zones that we intended to combine, we selected the least restrictive of the standards. Fortunately, this did not occur very often. However, it was much harder to assure that allowed uses were carried forward correctly, that no use was inadvertently omitted, or that an inappropriate use was not included in the new zone.

The city council also debated how best to address the implications of Proposition 207, ultimately confirming that a conservative and risk-averse approach was best. For this reason various development entitlements that might otherwise have been removed from the code because they conflict with the general plan (such as retail, lodging, and office uses in some industrial zones) remain in the final code.

However, there was consensus that many of the so-called "unclassified uses" of the 1991 code — allowed in all zones subject to approval of a conditional use permit — could be eliminated. Examples include railroad maintenance yards, airports, and golf courses as none of these would be appropriate, desirable, or practical in residential zones or even the downtown.

Resources

Images: Top — Rather than make the form-based code an exception to an otherwise conventional zoning framework, Flagstaff's hybrid approach is structured around the form-based code. Pictured is a rural area (T2). Photo Keji Iwai Photography, www.kejiiwai.com. Middle —As part of the code rewrite, Flagstaff undertook a citywide analysis of developed and constrained land. Large areas in white are ares where future development is possible. Source: Land Development Code Rewrite, City of Flagstaff, Arizona. Opticos Design Inc., Lisa Wise Consulting. ©OPTICOS DESIGNS, INC. Bottom — A bike commuter at a popular Flagstaff coffee shop. Photo Keji Iwai Photography, www.kejiiwai.com.

From APA. A session highlighting the Flagstaff case study and other hybrid codes, entitled "Going Hybrid: Effectively Combining Form-Based and Conventional Code Elements in a Citywide Code," will be presented at the **APA National Planning Conference** in Los Angeles on April 16.

Flagstaff and beyond. For more information on Flagstaff Zoning Code, visit **www.flagstaff.az.gov/zoningcode**. Contact Roger Eastman at **reastman@flagstaffaz.gov**. The Form-based Code Institute is at **www.formbasedcodes.org**.

Reading. A thorough overview of micro-scale analysis can be found in *Form-Based Codes: A Guide for Planners, Urban Designers, Municipalities, and Developers,* by Daniel G. Parolek, Karen Parolek, and Paul C. Crawford, FAICP; Wiley, 2008.

FINANCIAL (green)	ACTION NEEDED (yellow)	INFORMATIONAL (white)	
	X		1. Approval of the October 26, 2016 Minutes (See enclosed) – John Thodos, Chair
X	X		2. Treasurer's Report (See enclosed) – Frank Klipsch, Treasurer
			3. Finance and Personnel Committee/Financial Matters – Chuck Austin, Finance and Personnel Committee Chair
X	X		a. Bills (See enclosed)
X		X	b. Report on Progress on Commission's FY 2017 Program Budget as of 10/31/2016 (See enclosed)
X	X		c. Contracts/Grants for Consideration
			I. Other Contracts/Grants
			4. Bi-State Region Freight Plan Implementation - Muscatine Intermodal Freight Container Port Feasibility Study – David Gobin, City of Muscatine
			5. Questions or Comments by Commissioners
			6. Other Business
			7. Adjournment

MEETING ANNOUNCEMENT AND AGENDA
BI-STATE REGIONAL COMMISSION

Wednesday, November 16, 2016, 3:30 p.m.
Scott County Administrative Center
600 West Fourth Street
Davenport, IA

REGULAR LOCATION

NEXT MEETING: **Wednesday, December 21, 2016 – 3:30 p.m.**
Scott County Administrative Center
600 West Fourth Street
Davenport, IA

DB/sg
Agendas\BSRC Agenda.docx

MINUTES OF THE

BI-STATE REGIONAL COMMISSION

Wednesday, October 26, 2016, 11:30 a.m.
The Camden Centre
2701 First Street E
Milan, IL

MEMBERS PRESENT:	Thodos – Chair, Broderson, Carroll-Duda, Conrad, Earnhardt, Gallagher, Gordon, Gradert, Heninger, Hillman, Holmes, Klipsch, Maranda, Maslanka, Moore, O'Boyle, Raes, Schloemer, Stoermer, Sunderbruch, Tank, Terry, Waldron, Washburn
MEMBERS ABSENT:	Austin, Callaway-Thompson, Holst, Howard, Lawrence, Looney, Newton-Butt, Pauley, Sherwin, Sorensen
OTHERS PRESENT:	Invited Guests
STAFF PRESENT:	Berkley, Beswick, Bruce, Bulat, Cary, Connors, Deporter, Grabowski, Koethe, McCullough, Melton, Merchie, Miller, Moritz, Pan, Passman, Pearson, Saponaro, Schmedding, Schmid, Soliz, Van Hook, Whitson

Chair Thodos called the meeting to order at 11:35 a.m. and began by thanking the Village of Milan for the use of the Camden Centre for Bi-State Regional Commission's 50th Anniversary celebration.

1. Approval of the September 28, 2016 Minutes. Ms. Earnhardt moved to approve the minutes of the September 28, 2016 meeting as presented. Mayor Klipsch seconded the motion, and it passed unanimously.
2. Treasurer's Report. Mayor Klipsch presented the Treasurer's Report for the month ending September 30, 2016, noting an ending total bank and book balance of $784,194.58. Mr. Maranda moved the report be accepted as written and mailed. Ms. Earnhardt seconded the motion, and it passed unanimously.
3. Finance and Personnel Committee.
   a. Bills. Ms. Hillman presented the bills totaling $41,813.39, as listed on the following bills listing:

Bills List

Blackhawk Bank & Trust, VISA charge card expenses related to Illinois and Iowa Intergov meetings; Chief Elected and Chief Administrative Officials meeting; 1 staff attending the National Association of Development Organizations seminar; 1 staff attending the International City Managers Association seminar; 2 staff attending the Moving Iowa Forward seminar; 2 staff attending the Iowa Economic Development Authority workshop; 1 staff attending the Illinois Bike Summit; 1 staff attending the Illinois Counties Solid Waste Management Agency seminar; office supplies	$ 2,422.28
Bohnsack & Frommelt LLP, progress billing for year-end audit 6/30/16	10,000.00
Center for Community GIS, Quad City Trails Phase 2 Website Enhancements and Year 1 Carry Over Tasks (9/1/16-9/29/16)	6,876.00

Hurt, Norton & Associates, September 2016 legislative technical service and Professional Media Services (cost reimbursed by participating member governments)			9,750.00
Iowa Association of Regional Councils, FY17 Annual Membership Dues			3,300.00
Rock Island County Treasurer			5,580.11
11/2016	Rent	$4,618.38	
11/2016	Internet Access	88.00	
09/2016	Postage	748.37	
09/2016	Cell Phone	125.36*	
*(Partial costs reimbursed by HCEDP)			
Thomas A. Skorepa, P.C., Administrator Hearing Officer, September 2016 services (cost reimbursed by MUNICES)			3,885.00

Addendum
None

Mr. Maranda moved approval of the bills totaling $41,813.39 as presented above. Ms. Earnhardt seconded the motion, and it passed unanimously.

b. Report on Progress on Commission's FY 2016-17 Program Budget as of September 30, 2016. Ms. Hillman explained the Program Budget Status Report was mailed in members' packets. The Commission is 25% through the fiscal year with 21.2% expended and within budget.

c. Contracts/Grants for Consideration. Ms. Hillman presented the following contract amendment for consideration.

- Amendment to contract with Federal Transportation Administration to fund transit projects approved by Transportation Policy Committee in the Transportation Improvement Program. The contract is amended from up to $1.5 million to $1,541,576, and the period of the contract is July 1, 2012 to September 30, 2018.

Mr. Maranda moved approval of the contracts as presented above. Ms. Earnhardt seconded the motion, and it passed unanimously.

4. Other Business/Adjournment. There was no other business. The meeting adjourned at 11:36 a.m.

Respectfully submitted,

Kimberly Callaway-Thompson
Secretary

KC-T/sg
Minutes\BSRC minutes.docx

BI-STATE REGIONAL COMMISSION
TREASURER'S REPORT
FOR THE MONTH ENDING OCTOBER 31, 2016

	Balance October 1	Deposits	Withdrawals	Balance October 31
GENERAL SAVINGS ACCOUNT BANK & BOOK BALANCE:				
Balance – October 1, 2016	$ 648,333.00			
Add Deposits		$ 289,069.26		
Less Transfers			$ 248,890.95	
Balance – October 31, 2016				$ 688,511.31
RLF SAVINGS ACCOUNT BANK & BOOK BALANCE:				
Balance – October 1, 2016	$ 1,174.93			
Add Deposits		$ 0.15		
Less Transfers			$ 0.00	
Balance – October 31, 2016				$ 1,175.08
CHECKING ACCOUNT BANK AND BOOK BALANCE:				
Balance – October 1, 2016	$ 32,164.56			
Add Deposits		$ 143,531.93		
Less Checks Written			$ 143,982.27	
Balance – October 31, 2016				$ 31,714.22
PAYROLL ACCOUNT BANK & BOOK BALANCE:				
Balance – October 1, 2016	$ 2,522.09			
Add Deposits		$ 105,351.82		
Less Checks Written			$ 105,466.30	
Balance – October 31, 2016				$ 2,407.61
INVESTMENT ACCOUNTS BANK & BOOK BALANCE:				
Balance – October 1, 2016	$ 100,000.00			
State Bank of Orion				
6/25/16 – 12/25/16 (.20%)				
Add Investments Made		$ 0.00		
Less Investments Matured			$ 0.00	
Balance – October 31, 2016				$ 100,000.00
TOTAL BANK & BOOK BALANCE:				
Balance – October 1, 2016	$ 784,194.58			
Deposits in October		$ 537,953.16		
Withdrawals in October			$ 498,339.52	
Balance – October 31, 2016				$ 823,808.22
PASS THROUGH FUNDS				
BI-STATE RLF ACCOUNT:				
Balance – October 1, 2016	$1,124,310.05			
Add Deposits		$ 22,718.87		
Less Withdrawals			$ 95.00	
Balance – October 31, 2016				$1,146,933.92
MERCER-MUSCATINE RLF ACCOUNTS:				
Balance – October 1, 2016	$ 151,963.68			
Add Deposits		$ 12,889.89		
Less Withdrawals			$ 35.00	
Balance – October 31, 2016				$ 164,818.57

DM/sv
Budget\Treasurers Report.docx

BILLS TO BE CONSIDERED FOR APPROVAL
AT THE NOVEMBER 16, 2016
BI-STATE REGIONAL COMMISSION MEETING

City of East Moline, Municipal Code Enforcement System proceeds	$ 7,335.23
City of Rock Island, Municipal Code Enforcement System proceeds	20,472.30
Hurt, Norton & Associates, October 2016 legislative technical service and Professional Media Services (cost reimbursed by participating member governments)	9,750.00
Thomas A. Skorepa, P.C., Administrator Hearing Officer, October 2016 services (cost reimbursed by MUNICES)	3,360.00
TOTAL	$40,917.53

Additional bills for which invoices have not yet been received and will be listed on an addendum to be distributed separately.

sv
Budget\billslist.docx

BI-STATE REGIONAL COMMISSION
FY 2016-17 Program Budget Status Report
Through Month of October – 33% of Year

ADOPTED BUDGET: $2,073,608.00 **EXPLANATION:**
EXPENDED THROUGH OCTOBER: **$605,908.45 (29.2%)**
STAFF LEVEL BUDGETED: 25.00 F.T.E.
STAFF LEVEL STAFF LEVEL MAINTAINED: 21.50 F.T.E.

MEMBER GOVERNMENTS SERVED DIRECTLY AND ACTIVITIES DURING OCTOBER:

ALEDO –MMRLF Coord.; Transit Mobility/HSTP Planning; Economic Development Plan; Website Support.
ALPHA – HCEDP Participation; Transit Mobility/HSTP Planning, Liaison.
ANDALUSIA – RICWMA Staffing; MPO Trans. Coord.; Riverfront Council; Website Support.
ANDOVER – HCEDP Participation; Transit Mobility/HSTP Planning; Website Development.
ANNAWAN – Joint Purchasing Council; Transit Mobility/HSTP Planning.
ATKINSON – HCEDP Participation; Transit Mobility/HSTP Planning; Website Support; Services Presentation and Grant Info.
BETTENDORF – Air Quality Asst.; Drug/Alcohol Testing Consort.; I-74 Bridge Coord.; IAQC Transit Planner Coord. and FTA 5339 Grant Administration; Joint Purchasing; QCICNet; Riverfront Council; RLF Loan Admin.; Scott Co. Housing Council; Solid Waste Coord.; Trail Coord. and Trails Counting; REAP Plan Update; Park/Rec Plan Update; MPO Trans. Coord.
BLUE GRASS – Reg. 9 Transp. Coord.; Solid Waste Coord.; Website Support.
BUFFALO – Riverfront Council; Solid Waste Coord.; Trail Planning Coordination; IDPH Nutrition Grant.
CAMBRIDGE – HCEDP Participation; Transit Mobility/HSTP Planning; Grants Inquiry.
CARBON CLIFF –Joint Purchasing; RICWMA Staffing; MPO Trans. Coord.; Trail Planning.
COAL VALLEY – Joint Purchasing; MUNICES Coord.; RICWMA Staffing; Floodplain.
COLONA – Joint Purchasing; Floodplain; MPO Coord./FFC; IHDA Grant Inquiry.
CORDOVA – RICWMA Staffing; Riverfront Council; Website Support.
DAVENPORT – Air Quality Asst.; IAQC Transit Planner Coord.; Trans. Planning; FTA 5339 Grant Administration; Joint Purch.-Street Signs; QCICNet; Riverfront Cncl.; RLF Loan Admin.; Scott Co. Housing Cncl.; Solid Waste Coord.; Dav. Schools Haz. Mit. Plan; Trails Planning; PICH-Safe Routes to Schools Planning; MPO Trans. Coord.; Complete Streets Coord.
EAST MOLINE – Air Quality Asst.; E9-1-1 Coord.; IL QC Intergov. Comm.; Joint Purchasing; MUNICES Coord.; QCICNet; RICWMA Staffing; Riverfront Council; RLF Admin.; RMS Coord.; Interop. Proj.; MPO Trans. Coord./FFC; Trail Planning; Zoning Ordinance; Floodplain; Parcel Mapping Asst.
ELDRIDGE – Drug & Alcohol Consort.; Solid Waste Coord.; Website Support; Trails Planning & Grant Inquiry; MPO Trans. Coord.
GALVA – HCEDP Participation; Transit Mobility/HSTP Planning.
GENESEO – HCEDP Part.; Transit Mobility/HSTP Planning; Trail Planning; Mapping Asst.
HAMPTON – MUNICES Coord.; RICWMA Staffing; Riverfront Council.
HENRY COUNTY – HCEDP Participation; Joint Purch.; Transit Mobility/HSTP Planning; Trail Planning/Coord.; Legislative Priorities Asst.; MPO Trans. Coord./FFC; Zoning Review.
HILLSDALE – Transit Mobility/HSTP Planning.
KEWANEE – Transit Mobility/HSTP Planning.
LECLAIRE – Joint Purchasing; Riverfront Council; Solid Waste Coord.; MPO Trans. Coord.; Trails Planning; Comprehensive Plan, Data, & Mapping.
LONG GROVE – Reg. 9 Trans. Coord.; Solid Waste Coord.; Website Support; Survey Assistance.
MCCAUSLAND – Reg. 9 Trans. Coord.; Solid Waste Coord.
MILAN – E9-1-1 Coord.; IL QC Intergov. Comm.; Joint Purchasing; MUNICES Coord.; QCICNet; RICWMA Staffing; MPO Trans. Coord.; RLF Admin.; RMS Coord.; Interoperability Project; Cons. Dispatch Study Asst.; Hennepin Canal Trail Event Map & Logo.
MOLINE – Air Quality Asst.; E9-1-1 Coord.; Joint Purch.; I-74 Bridge Coord.; IL QC Intergov. Comm.; MUNICES Coord.; QCICNet; RICWMA Staffing; Riverfront Cncl; RLF Adm.; RMS Coord.; Trails Coord.; MPO Trans. Coord./FFC; PICH-Safe Routes to Schools Planning; Interop. Proj.; Parking Study Inquiry.
MUSCATINE CITY – Air Quality Asst.; Joint Purch.; Reg. 9 Transportation Coord.; MMRLF Coord.; Solid Waste Coord. & SWAP Form E; Trails Planning/ADT Coord.; Trails Use Count Collection; Riverfront Planning; Port Planning Coord.
MUSCATINE COUNTY – Air Quality Asst.; Joint Purch.; Reg. 9 Coord.; Trails Planning/ADT Coord.; Transit Mobility Coord.; MMRLF Coord.
NEW BOSTON – Transit Mobility Coord./HSTP Planning.
OAK GROVE – E9-1-1 Coord.; MPO Trans. Coord.
ORION – HCEDP Participation; Website Support; Transit Mobility/HSTP Planning; Fact Sheet/Community Profile Development.
PORT BYRON – RICWMA Staffing; MPO Trans. Coord.; Riverfront Council.
PRINCETON – Riverfront Council; Solid Waste Coord.; MPO Trans. Coord.; Trail Planning & Grants Inquiry.
RAPIDS CITY – RICWMA Staffing; Riverfront Council; MPO Trans. Coord.
RIVERDALE – Riverfront Council; MPO Trans. Coord.; Solid Waste Coord.; Trails Coord; Website Support; RISE Grant Inquiry.
ROCK ISLAND CITY – Air Quality Asst.; E9-1-1 Coord.; IL QC Intergov. Comm.; Joint Purch.; MUNICES Coord.; QCICNet; Riverfront Cncl.; RICWMA Stfg.; RLF Loan Admin.; RMS Coord.; Interop. Proj.; PICH–Safe Routes to Schools Planning, Neighborhood Partners & School-Community Task Force Meetings; Trails Coordination; MPO Trans. Coord./FFC.
ROCK ISLAND COUNTY – Air Quality Asst.; E9-1-1 Coord.; IL QC Intergov. Comm.; Joint Purchasing; LEPC Committee; MUNICES Coord.; QCICNet; RICWMA Stfg & Website Support; RMS Coord.; Trail Coord.; Transit Mobility/HSTP Planning; Passenger Rail; Floodplain Coord. Efforts; Haz. Mit. Planning Coord.; QC Health Initiative, PICH-Safe Routes to Schools Planning; Highway Safety Planning; MPO Trans. Coord./FFC; Enterprise Zone App.; Road Study Results Meeting.
SCOTT COUNTY – Financial Mgmt – Scott Co. KIDS and Scott Co. Hsg. Cncl.; Air Quality Coord.; I-74 Bridge Coord.; Joint Purch.; QCICNet, Reg. 9 Transportation Coord. & MPO Trans. Coord.; RLF Admin.; Local Food Systems Coord.; Trail Planning/ADT Coord.; REAP Plan Update; Transit Mobility/HSTP Planning; Interop. Project; QC Health Initiative; PICH-Safe Routes to Schools Planning; Countywide IT Services/Equipment Coord.; Hazard Mitigation Plan Update; QC & Co EPC Meetings.
SHERRARD – Joint Purchasing; Transit Mobility/HSTP Planning; Website Support.
SILVIS – E9-1-1 Coord.; IL Intergov. Comm. Coord.; Joint Purch.; MUNICES Coord.; QCICNet; RICWMA Stfg.; RMS Coord.; MPO Trans. Coord.; Trails Plan.; Zoning Inquiry; RLF Loan Admin.
VIOLA – Transit Mobility/HSTP Planning; Police Equip. Research.
WALCOTT – Reg. 9 Transportation Coord.; RLF Admin; Solid Waste Coord.; Trail Coord.
WEST LIBERTY – Air Qual. Coord.; Reg. 9 Transportation Coord.; Trails Plan/ADT Coord. Solid Waste Coord.; Musc. Co. Haz Mit Plan; MMRLF.
WILTON – Air Qual. Coord.; Reg. 9 Transp. Coord. & Trails Counter Collection; Solid Waste Coord.; MMRLF; Liaison.
WINDSOR – Transit Mobility/HSTP Planning.
WOODHULL – HCEDP Participation; Transit Mobility/HSTP Planning; Liaison.

Bi-State Report – October

COMMUNITY/ECONOMIC DEVELOPMENT: Provided information to Henry County Economic Development Partnership (HCEDP) board. Monitored scheduling for Enterprise Zone application, December 2016. Attended IA RELAT meetings. Attended Iowa Regional Council meeting. Assisted members with legislative priorities. Communicated with Mercer and Muscatine Counties' economic development officials to discuss development efforts and strategies.

DATA/GRAPHICS/MAPPING/ON-LINE SERVICES

Data Center: Staff responded to 14 data and map requests in October 2016 including 8 from local governments, 1 from a business, and 5 from non-profits. The data section of the Bi-State website had 60 page views. The data warehouse site (www.greaterqcregion.org) had 206 visits and 335 page views. Staff continued to prepare data for the LeClaire Comprehensive Plan, the Aledo Economic Development Plan, and the East Moline Zoning Ordinance.

Graphics/GIS/Mapping: 50th Anniversary preparation; Be Healthy QC (BHQC) – QCTrails.org Website and Safe Routes to Schools Mapping; QC Street Map (Folded & Wall Versions) Distribution; QC Urban Travel Model Data/GIS/Maps; Update/Maintain GIS Data for Street Centerlines, Traffic Counts, MPA Boundary, Federal Functional Class Routes, Urban Areas, Corporate Limits, Landmarks, Rail, Trails, and other layers.

www.bistateonline.org: Total pages viewed for October 2016 was 2,176 and top pages viewed included: Home Page (658); Search (148); Our Staff (111); Joint Purchasing Council and Bids (90); QC Metro Area Long Range Transportation Plan (65); Contact Us (39); Documents (39); and Careers (38).

ENVIRONMENTAL, RECREATION, RIVERFRONT SERVICES: Responded to inquiries & assisted with trail/recreation project funding assistance/grants and trail use counting. Served Rock Island County Waste Management Agency (RICWMA) with coordination of meetings, oversight, and management of waste disposal and recycling programs, including drop-off recycling program contract implementation; reporting; and overall agency administration. Responded to RICWMA telephone inquiries from general public & media concerning solid waste and recycling issues. Continued coordination of issues related to Bi-State Region Clean Air Partnership and strategies for emission reduction. Continued multi-jurisdictional hazard mitigation planning. Attended River Action meetings. Organized and held bi-monthly meeting of Quad City Riverfront Council.

INTERGOVERNMENTAL FORUMS AND REGIONAL SERVICES: Continued assistance to the Joint Purchasing Council (JPC). Worked on the following bids: copier/plotter paper, printer supplies, street signs and posts, food services supplies, janitorial and can liners, and turf and water treatment chemicals. Staffed Quad Cities Area intergovernmental forums and meetings of managers, administrators, and chief elected officials. Continued coordination and planning for the awarded Department of Justice interoperability grant. Assisted with Rock Island Arsenal issues. Participated in QC Emergency Planning Committee meeting.

REVOLVING LOAN FUND (RLF): Administered Bi-State RLF Program: Prepared meeting cancellation notice and financial summary report. Provided information to potential applicants. Continued receiving job creation information from active companies. Reviewed Rock Island company loan application. Administered Mercer/Muscatine RLF Program (MMRLF): Prepared financial summary report. Provided information to potential applicants. Worked with Aledo, Muscatine City and County, West Liberty, and Wilton to identify potential projects for gap financing.

TRANSPORTATION PLANNING, PROGRAMMING AND PROJECT DEVELOPMENT: Attended related meetings, presented information, and continued staff coordination of river crossing issues. Held Iowa interdisciplinary traffic safety meeting, and monitoring I-80/I-74 incident management planning. Prepared monthly and quarterly reports of federal transportation programs and coordinated related funding/reporting. Coordinated review of Illinois Quad Cities (ILQC) Federal Functional Classification (FFC) proposed revisions by Illinois Department of Transportation (ILDOT). Monitored air quality emission issues and exceedances. Continued "Make Air Quality Visible" strategic plan implementation. Worked on connections of American Discovery Trail (ADT)/Grand Illinois Trail and Mississippi River Trail and attended related meetings, as well as other trails and bike-sharing planning and grant assistance. Facilitated issues related to Bi-State Regional Trails Committee. Participated in Partnership in Community Health (PICH) grant facilitation. Coordinated Bi-State Drug and Alcohol Testing Consortium random testing program. Monitored MPO and Iowa Region 9 FY17 Transportation Planning Work Programs. Monitored MPO & Region 9 Federal Fiscal Year (FFY) 2017-20 Transportation Improvement Programs (TIP) including facilitating TIP revisions and maintenance of data entry in Iowa Transportation Project Management System (TPMS) as part of transportation improvement programming. Administered (Iowa Quad Cities) (IAQC) and Illinois Region 2 transit coordinator positions. Worked on Congestion Management Process update, Transportation Alternatives and Surface Transportation Program evaluation manuals' updates, and travel model documentation. Continued efforts to implement Federal Transit Administration (FTA) 5339 grant process. Monitored status of implementation of passenger rail service to Chicago. Attended IL State Freight Plan Input meeting. Participated in webinars, workshops, and conferences on various transportation topics related to freight, traffic safety, transit, walking, and bicycles.

NOTICE OF MEETING OF THE BOARD OF TRUSTEES
MUNICIPAL FIRE AND POLICE RETIREMENT SYSTEM OF IOWA
THURSDAY, NOVEMBER 17, 2016 10:00 am

LOCATION: MFPRSI OFFICES 7155 LAKE DRIVE SUITE 201, WEST DES MOINES, IA, 50266
OFFICE PHONE: (888) 254-9200

PRELIMINARY AGENDA [See Notes 1, 2, 3, 4 below]

MANAGERS

A. SERVICE FIRMS REVIEW: INVESTMENT MANAGERS

CONSENT ITEMS

MINUTES

B. MINUTES AND SCHEDULES
1. **REVIEW & APPROVAL OF MINUTES OF PREVIOUS MEETING(S)**
2. **SCHEDULES – CALENDARS – CONTRACT SUMMARY**

ACTIVITY

C. BENEFIT ACTIVITY REPORTS
1. **COMMUNICATION PROGRAM ACTIVITY**
2. **DROP PROGRAM ACTIVITY UPDATE**

PROJECTS

D. DEVELOPMENT PROGRAM REPORTS
1. **LEGISLATIVE REPORT**

DISCUSSION/ACTION ITEMS

E. FINANCIAL REPORTS
1. **STATUS & ANY PROPOSED MODIFICATION OF THE BUDGET**

F. BOARD INQUIRIES & ANY MISC. DISCUSSION ITEMS
1) **Administration Goals**
2) **Phone System Upgrade Recommendation**

G. DISCUSSION OF LEGAL MATTERS, IMMINENT/PENDING LITIGATION CASES (Tribune Company & Volkswagen)

H. CONSIDERATION OF & DETERMINATION ON APPEAL CASE (O'LOUGHLIN)

I. INVESTMENT PROGRAM UPDATE

J. INVESTMENT PERFORMANCE REPORT

K. SERVICE PROVIDER REVIEW: AUDITOR

L. BOARD EDUCATION: INFRASTRUCTURE

M. 2017 REPORT TO LEGISLATURE

NOTES: 1) Subject to additions & modifications as topics develop. At the discretion of the Chairperson of the Board, the scheduling of individual subjects during the meeting may be adjusted to facilitate the efficient utilization of time. 2) You are hereby notified that the above named public body will hold a meeting at the dates, time and place specified. A vote may be considered to go into closed session pursuant to Iowa Code 21.5(c)(f). 3) Consent Agenda: Subjects that require only consent or approval by the Board of Trustees, including informational topics. Subjects upon which information is provided for the Board but which will not be reviewed at the Board meeting except at the request of an individual Board member or the administration. 4) The Board of Trustees will work through the agenda until completion. Breaks will occur periodically as deemed necessary by the Board chairperson.

NEXT BOARD MEETING: January 5, 2017

MULBERRY AVENUE RECONSTRUCTION PROJECT

I. Project Contract Award

A. Contractor: Langman Construction Company (LCI)
B. Contract Amount: $1,888,269.44
C. City Council Award: May 19, 2016
D. Iowa DOT Stamp: June 13, 2016
E. Notice To Proceed: June 16, 2016
F. Funding Sources:
    I. Federal Surface Transportation Funds
    II. General Obligation Bonds
    III. Sewer Extension Reserve Fund
    IV. Road Use Tax Fund
G. This project is an 80%-20% split with Federal Funds
H. $56,700 in DBE commitment
I. Soft Costs to date = $246,886.48

II. Schedule

A. LCI has 75 working days to complete the project (per DOT specifications).
    I. Phase I: Mulberry/Houser Intersection – completed
    II. Phase II: Mulberry/Houser sewer connection and Church entrance – completed
    III. Phase III: Houser to Cell Tower Road – sewer work completed; paving underway
    IV. Phase IV: Cell Tower Road to Steamboat Way – storm sewer being installed
B. LCI has used 78.67% of time allocated (10/22/16)
C. LCI has been paid for 68.9% (Pay Application #6).
    1. Note: LCI is behind schedule because of utility delays and wet conditions occurring in Phase 4 of the project.
    2. Slip form paving will significantly change the dollar/time allocated percentage
D. LCI did not need to suspend work in September due to the utilities shut down period as a result of very well coordinated efforts by Langman's site superintendent. LCI worked on ditch fills and started storm sewer installation. Grade cutting did wait for utilities.
    1. The twenty (20) day window for utilities was reduced to two weeks in Phase III. All but Alliant Energy left prior to Phase IV.
E. **Anticipated Completion Date: November 2016**

III. Job Performance

A. During the project the City has supplied trench backfill and modified subbase to the contractor at a value of $100,120.

B. Weekly Project meetings with contractor, subcontractors, utilities and city staff are held on Friday mornings to coordinate plans and address outstanding issues or disputes (none to date).

IV. Budget

A. The project is considered within budget at this time.

B. Change Orders:

I. Trench Backfill = $81,510

II. Modified Subbase = $1,920

III. Detour Signage = $990

Note: During the design the plans & specifications show granular backfill but this item was omitted as a pay item and/or quantity, an oversight by both the Design firm (Shoemaker-Haaland) and City Staff.

--- Change Order will be needed as a result of over excavating to relocate MPW's fiber optics.

C. Value Engineering Opportunities:

I. When the decision was made to use material from the Airport for granular backfill, this reduced the Change Order #1 from $158,550 to $81,510.

II. Likewise the material from the Airport for modified subbase reduced Change Order #2 from $25,000 to $1,920.

III. There may be another opportunity for cost reduction due to value engineering with the construction of the retention basin using more material from the airport.

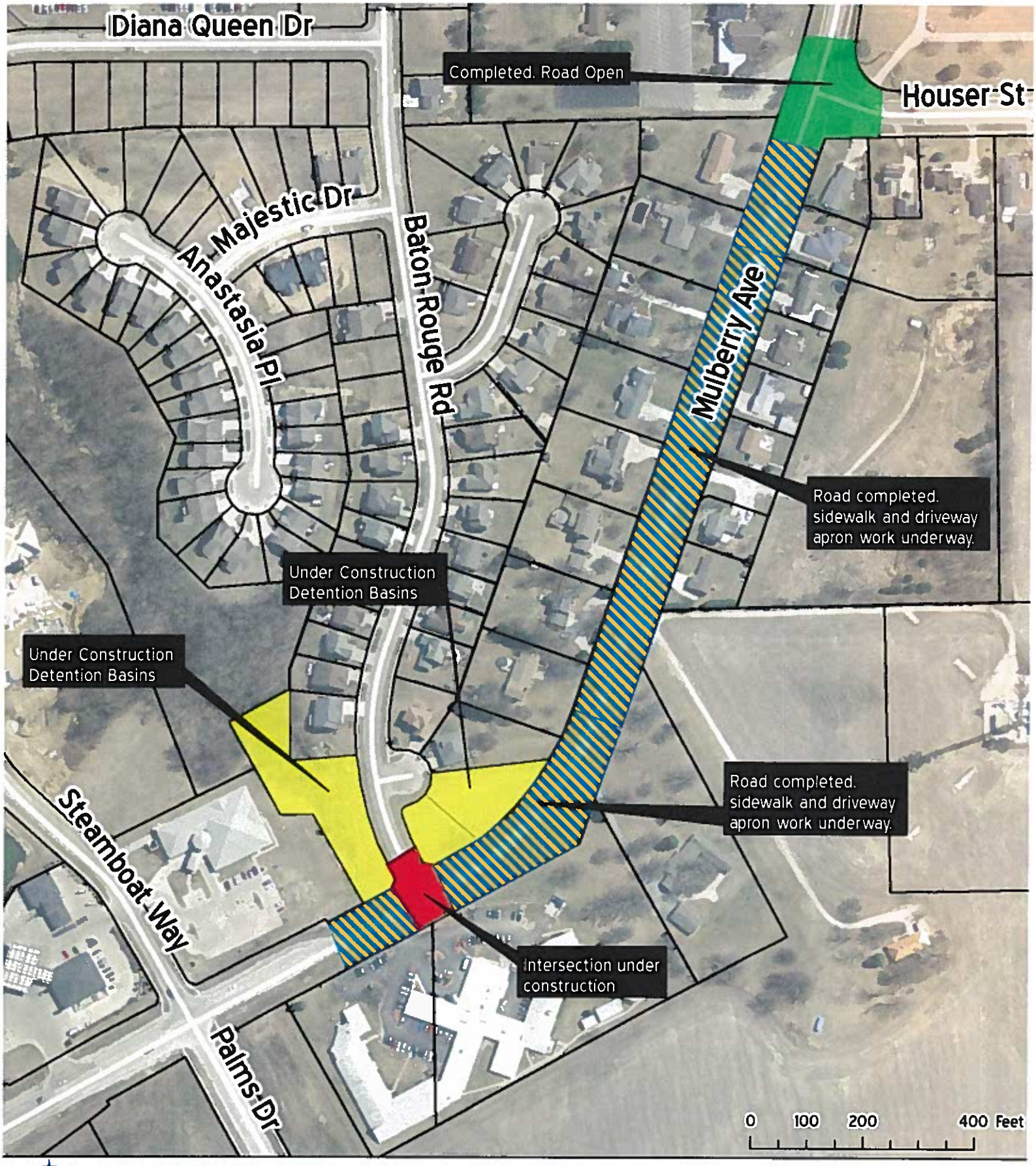
D. There are no significant increases or decreases in project costs expected at this time.

V. Citizen Comments

The City and/or the contractor have not received any specific negative feedback from the homeowners impacted at this time. The access roads constructed have proven to be very durable and convenient. We plan to distribute a private newsletter to the residents updating them on the project's progress.

TENTATIVE MULBERRY AVE. RECONSTRUCTION PROJE(

Contractor/Subs	October 24th - October 28th	October 31st - November 4th
Langman Construction	Storm Sewer in Ditch parallel to Baton Rouge Road	Finishing Detention Basin
All American Concrete	Pave South Half of Mulberry	Mulberry & Baton Rouge Sidewalks and Driveways
Enright Seeding		Surface Restoration Phase III and IV
MPW - Electric	Review Street Lighting	Completed
MPW - Water		
Alliant Energy		
Century Link		



MUSCATINE

Mulberry Project Update
11/4/2016

Date Source: Muscatine Area Geographic Information Consortium, City of Muscatine
Prepared by: Andrew Fangman, City Planner
Date: November 4, 2016

N

RUNWAY 6/24 RECONSTRUCTION AND ASSOCIATED TAXIWAYS

I. Project Contract Award

A. Contractor: Manatts, Inc.
B. Contract Amount: $3,985,699.84
C. City Council Award: October 15, 2015
D. Notice To Proceed: March 2016
E. Funding Sources
   (1) FAA Discretionary Funding
   (2) FAA Entitlement Funding
   (3) General Obligation Bonds
F. This Project is a 90% - 10% split with Federal Funds

II. Schedule

A. Completion Date: April 20, 2017
B. Manatts, Inc. has been paid for 97.18% of the contract amount for completed
C. Manatts, Inc. is ahead of schedule considerably
   (1) August 18, 2016: Landscape subcontractor, Enright, placed seed along runway
   (2) August 19, 2016: Advance Traffic Control (subcontractor) painted runway and removed barricades and all traffic control on runway
   (3) August 19, 2016: FAA (Cedar Rapids) activated their facilities/infrastructure and completed their walkthrough and punch list
   (4) August 19, 2016: Runway was opened to air traffic without the use of the ILS
   (5) August 22, 2016: FAA finished a final check and activated the ILS
D. September 1. 2016:
   (1) Substantial Completion
   (2) Beneficial Occupancy of Runway 6/24
   (3) Pre-Final Pay Application
E. September 15, 2016: Reduction of Retainage
F. **Stormwater Inlets were completed in October**
G. **A Pay Application for the Inlet work will be submitted in November**
H. Final Pay Application: April 2017
I. Final Closeout: Spring 2017 (once seeding is completed, silt fence removed, inlet soil stabilization and material removed from the site)

III. Job Performance

A. Communication among the entire construction team, consultant, construction administration and Carver Aero has been excellent.
B. Weekly project meetings with contractor, consultant and subcontractors were held on Friday afternoons.

IV. Budget

A. Final payout for this project is expected to be UNDER the contract amount by 3%. This includes the only change order for $137,482.83.
B. Change Order #1: $137,482.83
   (1) This Change Order resulted in the contractor processing the broken concrete (modified subbase) and asphalt millings (special backfill) in accordance with IDOT standards. The product was given to the Airport to be used for other access roads and future T Hanger base material as well as other project needs.
   (2) Since this project is a 90/10 split, the actual cost to the city is $13,748.
C. Value Engineering Opportunities
   (1) The number of subdrains was reduced resulting in a savings of approximately $10,000.
   (2) The use of the processed material (concrete & asphalt) at other locations at the Airport significantly saves money for the upgrade and development of access roads and the sub base for the future T-Hangar project. (See B[1] above and the site map provided)
   (3) The City use Project Managers, Bill Haag and Steve Dalbey, as well as city staff, Adam Thompson and Jim Edgmond, to assist Anderson-Bogart (engineering consultant) to reduce construction administration costs. This effort has resulted in a savings of $115,000. It is a good reflection of the benefits of a City Project/Construction Team vs. Consultant Construction Administration whose rates are three (3) times greater.

V. Comments

A. Throughout this project the FBO, Carver Aero, has been very supportive and appreciative of the benefits of a new runway.
B. The City's Public Works Department – Roadway Maintenance Division – has hauled material to various locations in preparation for future projects. They have been instrumental in constructing the additional access roads.
C. Culvert inlet protection is still under construction and expected to be completed this fall

MUSCATINE ART CENTER/MUSEUM HVAC REPLACEMENT AND MISCELLANEOUS WINDOW RENOVATION PROJECT

I. Project Contract Award

A. Contractor: Crawford Company

B. Contract Amount: $1,590,520
Change Orders : $ 198,575
==========
$1,789,095

C. City Council Award: April 7, 2016

D. Notice to Proceed: May 25, 2016

E. Funding Sources:
(1) General Obligation Bonds
(2) Roy J. Carver Charitable Trust
(3) Muscatine Art Center Support foundation

II. Schedule

A. Completion Date: February 28, 2017

B. Crawford Co. has completed 77% of the base contract work and 25% of change order work that was approved in July 2016 as of October 25, 2016 (based on Pay Application #6).

C. Crawford Co. is ahead of schedule:
(1) Work in the Musser Museum is Substantially Completed (September 2016). Testing remains.
(2) Crawford Co. continues work on Phase II – Linkage and Stanley Gallery
(3) Replacement of Storefront Windows in the Linkage is essentially completed.
(4) The GeoThermal system has been filled and is operational. Landscaping has beenb completed.
(5) Electrical service by Muscatine Power & Water and Bickle (subcontractor) is completed
(6) HVAC work on the Carriage House continues.
(7) Repair of Carriage House windows and frames continues
(8) Landscaping repaired and excavation area seeded with new grass seed.
(9) Ductwork in the Stanley Gallery was being cleaned.

D. There are NO outstanding issues at this time that could change the schedule

III. Job Performance

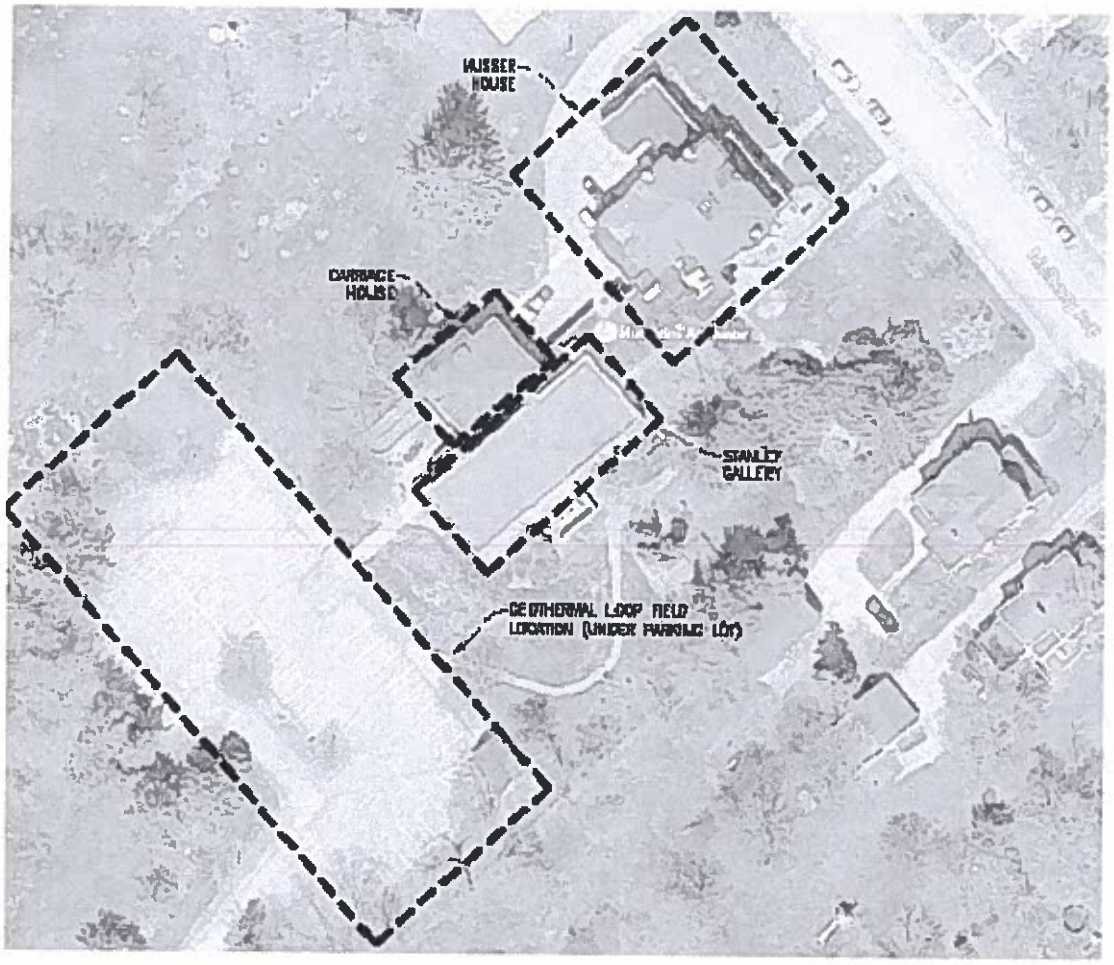
A. Communication among the entire construction team, consultant, construction administration and Muscatine Art Center staff has been excellent.
B. Bi-weekly project meetings with the contractor, subcontractors and consultant are held on Tuesday afternoons.

IV. Budget

A. This project is considered within budget at this time.
B. Change Orders:
   (1) Change Order #1 ($147,074.25):
   Acceptance of alternates 2A, 2B, 2C and 4 as submitted in the original Crawford bid. Work includes window repair/replacement, HVAC system replacement and control system upgrades in the Carriage House and plaster repair in the Music Room.
   (2) Change Order #2 ($51,500.75):
   Revisions of geothermal loop, deletion of variable refrigerant flow unit ventilators and upgrade of electrical items
C. Instructions to Contractors (ITC) to provide new track lighting, more lighting in the Musser Museum basement equipment room, needed upgrade to the Musser Museum electrical system grounding have been issued. Contractor has submitted Change Authorization Requests (CAR) for these three ITC's which are being reviewed by A&J Associates and Art Center staff. These change requests are projected to be part of Change Order #3 when and if they are accepted by the Art Center staff.
D. The Change Order request to add "track lighting" in the Musser Museum has been rejected by the Museum and City staff.

V. Comments

It has been noted at the bi-weekly project progress meetings by the contractor and subcontractors that this project has been a good example of professional, project management. Meetings keep everyone focused on their tasks; identify goals for the next two weeks; and resolve any/all questions regarding contractor/subcontractor performance and the responsibility and expectations from the owner – Art Center and Public Works Building & Grounds personnel.



#201310.01 MUSCATINE ART CENTER	
Project Progress Report – November 7, 2016	
GEOTHERMAL LOOP FIELD	
1. GEOTHERMAL LOOP FIELD INSTALLATION	100% COMPLETE
2. LANDSCAPE REPAIR	100% COMPLETE
MUSSER HOUSE	
1. HVAC	100% COMPLETE
2. ELECTRICAL	100% COMPLETE
3. ROOF WORK	0% COMPLETE
4. TUCK POINT WORK	0% COMPLETE
5. PAINTING	0% COMPLETE
LINKAGE	
1. HVAC	40% COMPLETE
2. ELECTRICAL	50% COMPLETE
3. ROOF REPLACEMENT	40% COMPLETE
4. WINDOW REPLACEMENT	100% COMPLETE
STANLEY GALLERY	
1. HVAC	80% COMPLETE
2. ELECTRICAL	80% COMPLETE
3. ROOF WORK	40% COMPLETE
4. WINDOW REPLACEMENT	100% COMPLETE
CARRIAGE HOUSE	
1. HVAC	10% COMPLETE
2. ELECTRICAL	30% COMPLETE
3. WINDOW REPLACEMENT	65% COMPLETE
4. PAINTING	0% COMPLETE

CDBG FAÇADE CONSTRUCTION PROJECT: CEDAR ST. to IOWA AVE.

I. Project Contract Award

A. Contractor
   (1) Façade: Woodruff Construction
   (2) BioCell: Triple B Construction

B. Contract Amount
   (1) Woodruff (Façade): $319,800
   (2) Triple B (BioCell): $69,558

C. City Council Award:
   (1) Woodruff (Façade): March 17, 2016
   (2) Triple B (BioCell): April 21, 2016

D. Notice to Proceed:
   (1) Woodruff (Façade): August 1, 2016
   (2) Triple B (BioCell): June 8, 2016

E. Funding Sources:
   (1) Woodruff (Façade)
      a. CDBG Grant
      b. Private Contributions
      c. Utility Companies
         i. Muscatine Power & Water ($120,000 - $150,000)
      d. Road Use Tax Funds ($30,000)
      e. Downtown TIF Project Balance
   (2) Triple B (BioCell)
      a. CDBG Grant

F. The Project was awarded $500,000 in a Community Development Block Grant

II. Muscatine Power and Water

A. Completed in September 2016

B. Scope of Services:
   (1) All electrical and communication lines have been installed underground
   (2) Reconnected underground service to all buildings
   (3) MPW dug trenches in R-O-W for main line as well as customer services
   (4) Removed all overhead wires
   (5) Currently removing all remaining poles

C. Further discussion for one alley/security light is underway

III. City of Muscatine: Public Works

A. Public Works staff has been working with MPW on signage, concrete sawing and removal, material replacement, sidewalk installation and a manhole riser
B. Overlay of the alley is scheduled:
   (1) Milling – **November 7, 2016**
   (2) Overlay – **November 14, 2016**

IV. Woodruff Construction

A. Subcontractors:
   (1) Ottobaum – Masonry
   (2) Jerry Raush Painting
B. Façade work began August 22, 2016
C. Scope of Services:
   (1) Tuckpointing
   (2) Painting
   (3) Minor Construction (handrails, doors, decks)
D. On Schedule to meet **November 15, 2016 COMPLETION DATE**
E. Change Orders:
   (1) CO #1: Completion date changed from July 31, 2016 to October 31, 2016
   (2) CO #2: $33,988
      i. $28,000 is property owner's contribution
      ii. $5,988 is for additional construction work
   (3) CO #3: $13,043
      i. Repair upper seven courses of brick on rear façade at 106 & 108 2nd.
   (4) CO #4: $6,952.00
      i. Stucco repair at 107 Iowa Ave
F. Job Performance and Conflicts:
G. Chimney at 106/108 E. 2nd had to be removed because of safety issues (at owner's expense)
   (1) Chimney will be replaced by owner:
      i. Brick Chimney ($25,000)
      ii. Metal Chimney ($20,000)
      iii. Decision to be made by October 1, 2016

(2) The City will reallocate $20,000 to other tuckpointing, painting and/or construction needs of the building

(3) Potential Schedule Issues:

i. If Woodruff is contracted to replace the chimney, an additional 1-2 weeks will be needed.

ii. The deck area behind Missipi Brewing Company will be removed and reconstructed. Possible obstructions could result in a delay.

(4) Communication between the contractor, subcontractors, MPW and the City has been very good.

(5) Weekly Project Progress meetings are conducted on Thursday mornings.

H. Value Engineering Opportunities:

The City reduced the façade work originally specified in order to stay within the budget.

I. Citizen Comments:

A complaint was received regarding the dust caused by tuckpointing at the Medical Arts Building.

J. Resolution Accepting Completed Project is expected at the November 17, 2016 City Council Meeting.

V. Triple B Construction

A. BioCell construction began on September 5, 2016 and was completed on September 15, 2016

B. Change Orders:

(1) CO #1: Reduced price from $69,558 to $33,682.50

(2) CO #2: Additional curb work and excavation required. Estimated cost is $2,000

C. Work to be Completed:

(1) Additional mulch is needed

(2) Plants to be installed by city staff

(3) Plant costs: $2,700

D. Job Performance and Conflicts:

(1) Very Satisfactory

(2) Triple B's schedule was very flexible enabling better coordination with other construction entities (i.e. MPW & Woodruff)

E. Value Engineering Opportunities:

The city reduced the BioCell work originally specified in order to stay within budget.

F. Resolution Accepting Completed Work is expected at the November 17, 2016 City Council Meeting.

VI. Other

A. It is estimated this project will cost approximately $393,000 in construction
B. $97,000 is allocated for soft costs (i.e. design)
C. $10,000 is reserved for in-house construction administration
D. Total: $500,000 (Grant Award)

West Hill Storm & Sanitary Separation Project – Phase IIIB

I. Project Contract Award

A. Contractor: Hagerty Earthworks, LLC (HELLC)
B. Contract Amount: $1,645,093.60
C. City Council Award: April 9, 2015 (Phase III)
D. Notice to Proceed: March 14, 2016
E. Funding Sources: One Cent Local Option Tax

II. Schedule

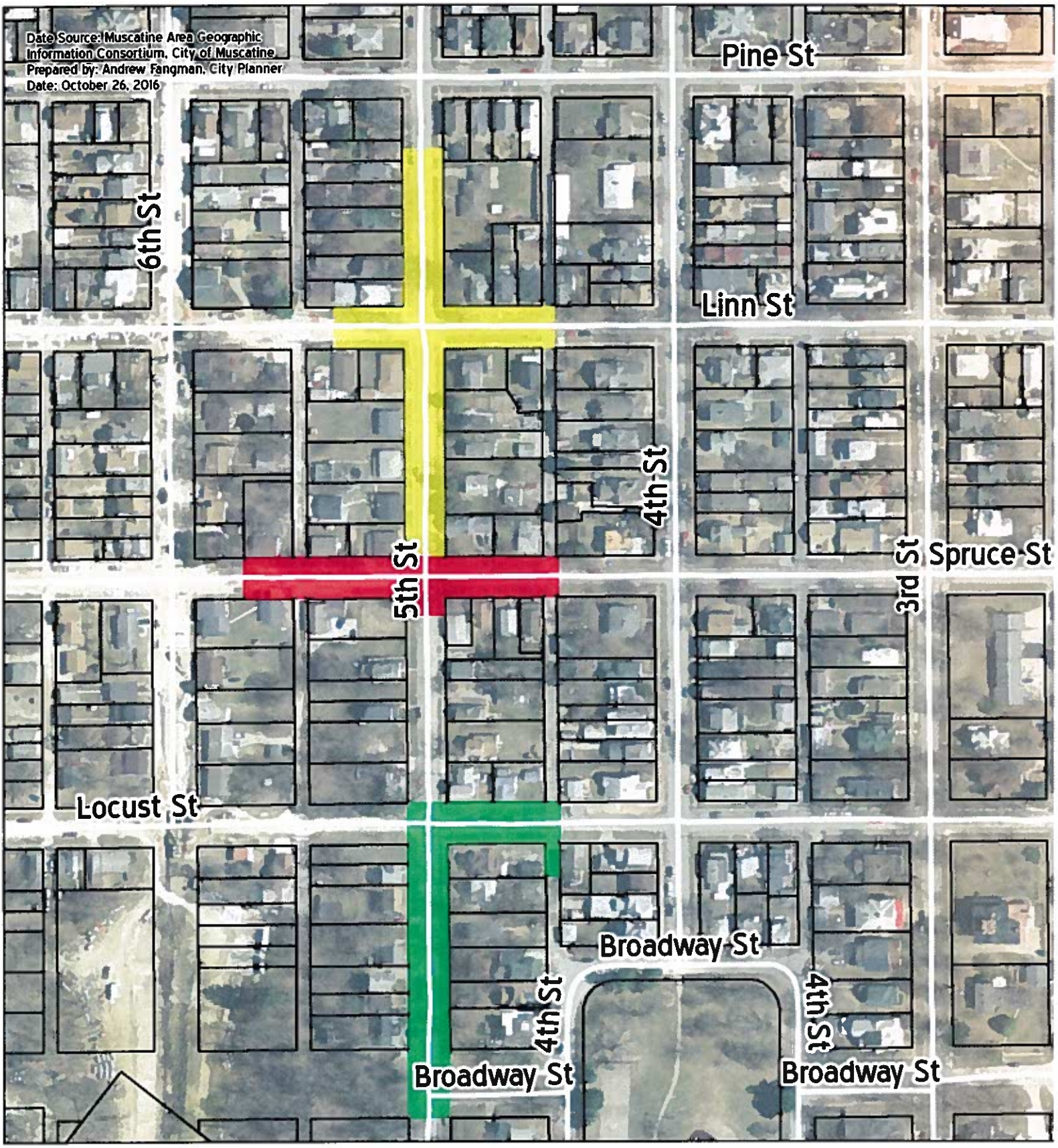
A. Completion Date: December 13, 2016
B. HELLC has completed approximately 75% (per Pay App #15 through October 23, 2016)
C. HELLC should complete the IIIB Phase unless Contractor/Subcontractors get distracted with other Fall season work demands they have and/or wet conditions

III. Job Performance

A. There have only been minor utility conflicts (MPW) compared to IIIA
B. Small issues/feedback from the citizens in the construction zone has occurred and all have been addressed.
C. Weekly project meetings with contractor, subcontractors, utilities and city staff are held on Thursday afternoons to coordinate plans and address outstanding issues or disputes.
D. The Project Manager routinely provides updates to the affected residents by the use of door hangers. Since the project is spread over multiple blocks not all homeowners are impacted at the same time.

IV. Budget

A. This project is considered to be within the budgeted amount allowing for some cost overruns offset by certain cost savings. The exact numbers are available via Pay Applications, Change Order Listings, Weekly Accounting Log and Item Quantity Spreadsheets.
B. Change Orders:
   (1) To date there has been $16,145.66 in change orders primarily the result of quantity adjustments (i.e. concrete, engineering fabric etc.). Note: It is anticipated that there will be more quantity adjustments when paving continues.
   (2) Not reflected in Change Orders, but significantly impacting the budget, are line items in the contract amount that will NOT be needed. Such items include $4K for a field office, $20K for water service piping as well as 24 other lines totaling a savings of $61,112.00
C. Value Engineering Opportunities:
   (1) HELLC requested approval for a change in the depth of a particular link of storm sewer pipe
   (2) This request was reviewed by the Project Team and approved resulting in a $10K savings



MUSCATINE

West Hill Sewer Seperation Phase 3B
Update as October 26, 2016

Sewer Work Complete. Paving Complete. Sidewalks 95% Complete.

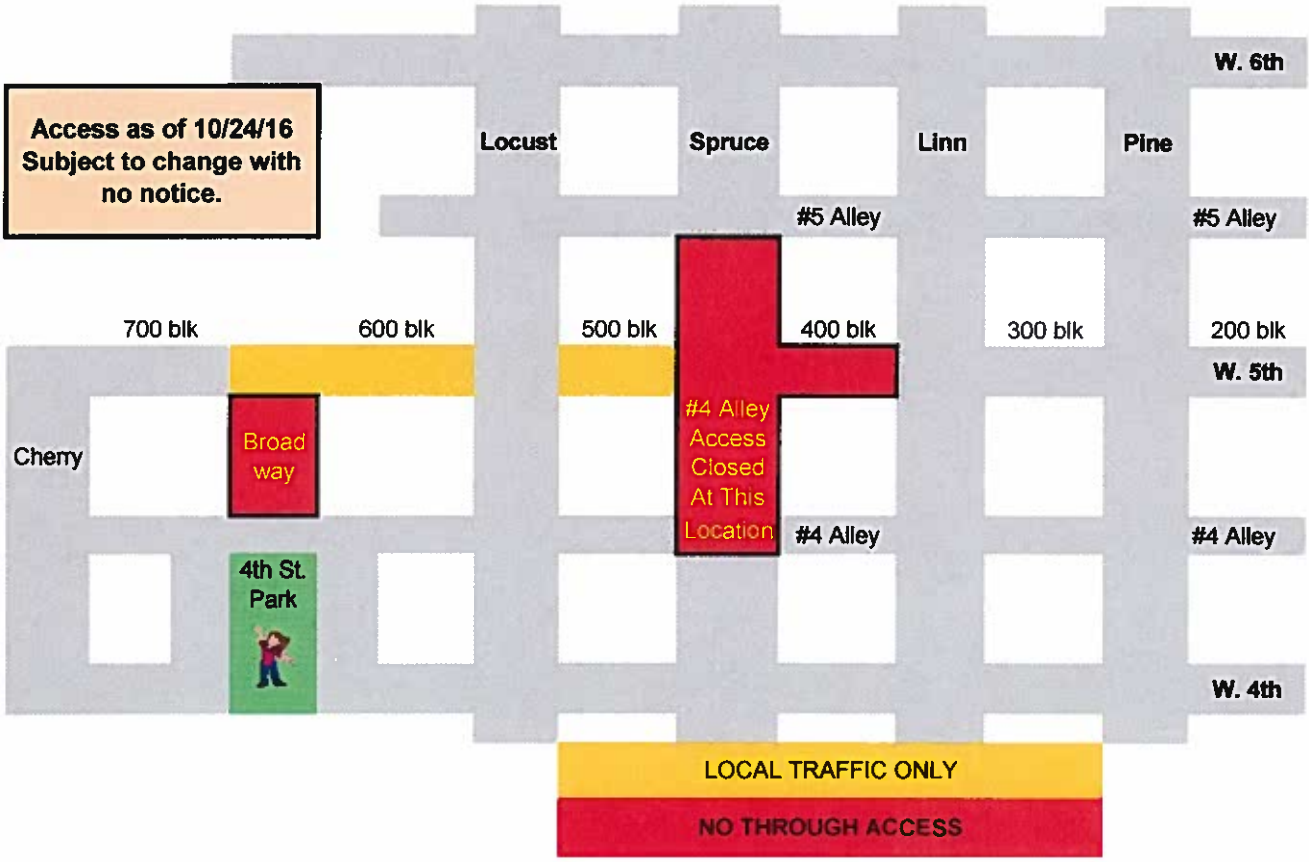
Sewer Work 95% Complete. Paving 0% Complete.

Sewer Work Complete. Paving 99% Complete.

0 100 200 400 Feet

N

WEST HILL SEWER SEPARATION PROJECT 3B 2016
ROAD CLOSURE DIAGRAM



Linn Street is open to traffic between W. 4th and W. 6th. The 300 block of West 5th Street is now open to Linn from the east. The 400 block of West 5th Street is being kept closed to facilitate the final dirt work and completion of the sidewalk paving. The contractor has completed the sewer work between W. 5th and the #4 alley. The 400 block of Spruce and the 500 block of W. 5th, including the intersection of Spruce and W. 5th, are being graded and prepared for paving. While the paving is being completed in those areas the contractor will move to the 500 block of Spruce and complete the sanitary and storm sewer work between the #5 alley and W. 6th St. When that work is done the 500 block of Spruce can be graded for paving.

CMAP

Form-Based Codes: A Step-by-Step Guide for Communities

Acknowledgements

Special thanks to:

Daniel and Karen Parolek, *Opticos Design, Inc.*

Carol Wyant, *Form-Based Codes Institute*

Alan Mammoser, *Form-Based Codes Institute*

Heather Smith, *Congress for the New Urbanism*

Krysti Barksdale-Noble, *United City of Yorkville*

Jeff Brady, *Village of Glenview*

Robert Cole, *Village of Oak Park*

Kimberly Flom, *Village of Orland Park*

Bryan Gay, *City of Crest Hill*

Scott Magnum, *Village of Des Plaines*

David Mekarski, *Village of Olympia Fields*

Dustin Nilsen, *Village of Antioch*

Jeff O'Brien, *Village of Downers Grove*

Kimberly Stone, *Village of Lockport*

Additional thanks to the following firms for permission to use images of their work:

Dover, Kohl & Partners

Farr Associates

Ferrell Madden/Code Studio

The Lakota Group

Moule & Polyzoides, Architects and Urbanists

Teska Associates

Torti Gallas and Partners

Urban Advantage

Urban Design Associates

Chicago Metropolitan Agency for Planning

The Chicago Metropolitan Agency for Planning (CMAP) is the region's official comprehensive planning organization. Its GO TO 2040 planning campaign is helping the region's seven counties and 284 communities to implement strategies that address transportation, housing, economic development, open space, the environment, and other quality of life issues.

See **www.cmap.illinois.gov** for more information.

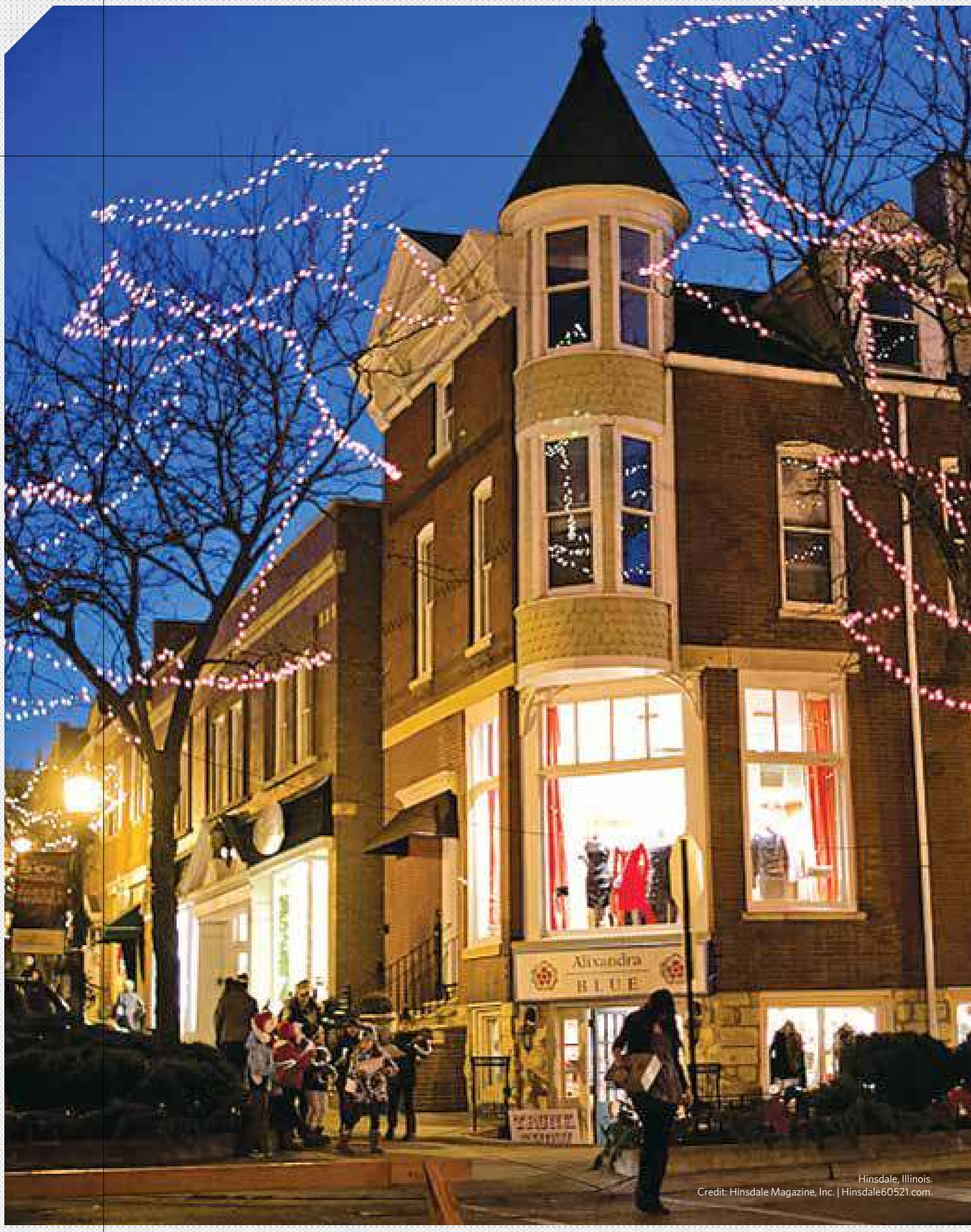
Endorsed by

FBCI Form-Based Codes Institute

The Form-Based Codes Institute (FBCI) is a non-profit professional organization dedicated to advancing the understanding and use of form-based codes. FBCI pursues this objective through three main areas of action: developing standards for form-based codes, providing education, and creating a forum for discussion and advancement of form-based codes.

See **www.formbasedcodes.org** for more information.

Table of Contents



Hinsdale, Illinois.
Credit: Hinsdale Magazine, Inc. | Hinsdale60521.com.

Purpose of Handbook

One of the central goals of the GO TO 2040 comprehensive regional plan is to make our region a better place to live. This means creating livable communities at the local level through planning and development decisions made by local government officials, developers, and individuals. This handbook provides a step-by-step guide to form-based codes, an alternative approach to zoning.

GO TO 2040

GO TO 2040 states that defining "livability" is a challenge simply because people's values and priorities are so diverse. However, when residents across the region describe their values and priorities, certain commonalities of livability emerge. Livable communities are healthy, safe, and walkable. Livable communities offer transportation choices that provide timely access to schools, jobs, services, and basic needs. Livable communities are imbued with strength and vitality, features which emerge from preserving the unique characteristics that give our diverse communities "a sense of place."

GO TO 2040 states that the building blocks of local planning are comprehensive plans, consistent ordinances and other regulations, and trained decision-makers. Local comprehensive plans are the vision of what a community wants to become and the steps needed to meet that goal. Most communities find that a first necessary step to implement a comprehensive plan is to update their zoning ordinance.

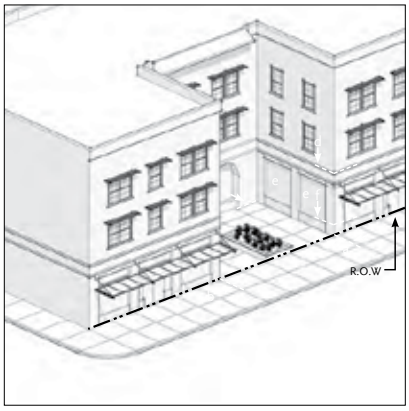
As communities have sought to reinvigorate their downtowns or create viable commercial corridors, many have found that conventional methods of zoning, oriented around regulating land use, may not address certain physical characteristics that contribute to the sense of place in a community. While it is important to consider which uses should occur in a given place, we live in a visual world, and conventional methods of zoning often do not sufficiently address the fundamental aesthetic character of our communities — existing or desired.

Form-based codes, which emphasize the physical character of development, offer an alternative. This handbook explains what form-based codes are and how they are created to help communities assess whether they may be right for them.

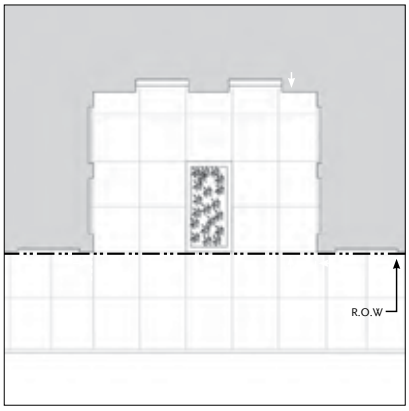
Who Should Use This Handbook?

Most communities lack the staff expertise and time necessary to develop a form-based code on their own and therefore choose to hire consultants to lead the effort and perform most of the work. However, it is vital that municipalities understand the scope of work that is required in the creation of a form-based code. Municipalities that educate themselves on the typical steps that are necessary will be in a better position to gauge the amount of outside assistance that is needed (and the amount of funding that will be required), write a more precise request for proposals (RFP), and evaluate consulting firms bidding for the project. Once the development of the form-based code is underway, well-informed municipal staff can better facilitate the process and monitor the work of hired consultants.

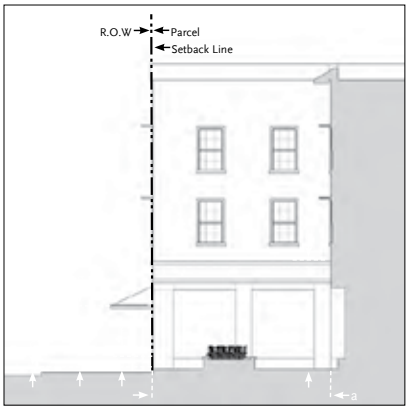
Municipal staff will be responsible for administering the new form-based code once it is adopted, and possessing an understanding of how it was created is likely to provide a more nuanced appreciation of the reasons behind the regulations, as well as the amount of hard work that went into its creation.



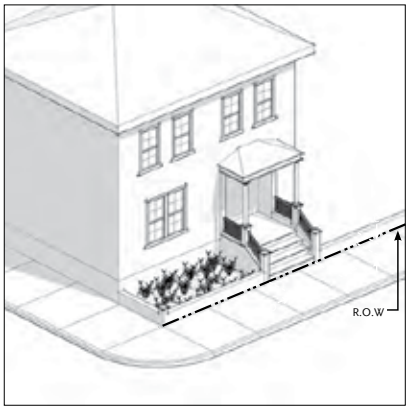
Axonometric Diagram: Forecourt



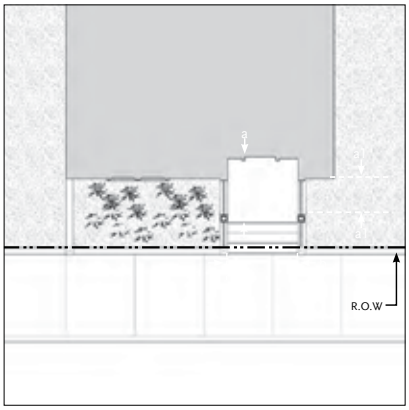
Plan Diagram: Forecourt



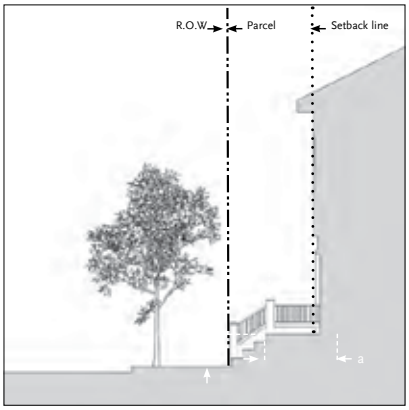
Section Diagram: Forecourt



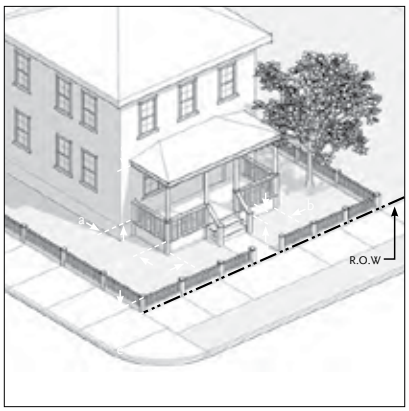
Axonometric Diagram: Frontyard / Porch



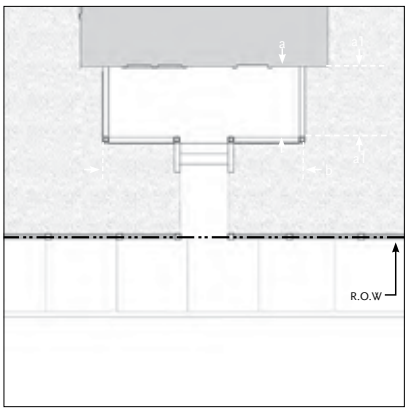
Plan Diagram: Stoop



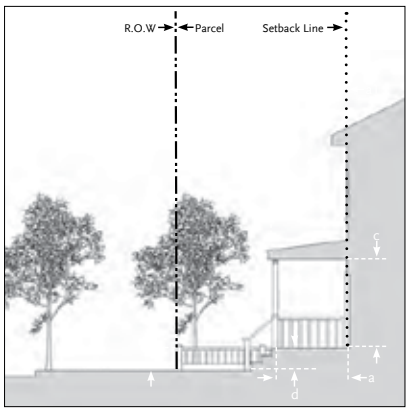
Section Diagram: Stoop



Axonometric Diagram : Frontyard / Porch



Plan Diagram: Frontyard / Porch



Section Diagram: Frontyard / Porch

Architectural Standardards - Frontage Types, Transit Zoning Code (2010), City of Santa Ana, California.
Credit: Moule & Polyzoides, Architects and Urbanists.

Introduction
What are Form-Based Codes?

Nearly everyone can identify things they like in their community and things they want to change. Whether a favorite house, street, or place, it's common to wonder why there isn't more of what we like and less of what we don't.

There are many reasons for this dissatisfaction with the physical character of many of our communities, especially the quality of the public realm. One reason is that conventional methods of zoning, which are focused on what uses are permitted, have often shaped the form of the built environment in unintended—and occasionally unwanted—ways.

Form-based codes include specification of what uses are permitted in a building or place, but focus on the physical character of development, particularly how it relates to the public realm that everyone shares. A growing number of communities across the country and in our region have found that form-based codes are a more precise and reliable tool for achieving what they want, preserving what they cherish, and preventing what they don't want.

Chicago suburbs from the air.
Credit: Flickr user Shawndra and Simon.

Conventional Zoning

Conventional methods of zoning arose out of the need to protect public health, safety, and welfare by preventing the most negative impacts of siting, size, and use of buildings. Limiting the spread of fire from one building to another, providing access to sunlight and air, and separating smoke-producing industry from residential uses are but a few of the worthy objectives that conventional zoning was intended to fulfill.

In addition to helping protect public health, safety, and welfare, conventional zoning was meant to protect property values by separating incompatible uses in a particular area or district. This separation is typically accomplished by creating single- or limited-use zones that segregate different land uses, such as residential and commercial.

Fueled in part by rapid national growth in population and gross domestic product that followed the end of World War II, the practice of separating "incompatible" land uses led to the near universal segregation of different land uses—often at great distance from one another. As a result, cities and towns have increasingly been placing residential uses in one area, commercial in another, and industrial in still another.

In particular, conventional zoning tends to isolate single-family homes from all other types of development. The development resulting from such zoning requirements often makes it difficult, if not impossible, to walk from home to purchase a quart of milk. Public transportation has become increasingly less efficient in these areas, and travel by personal automobile has often made more sense. Accordingly, maximizing the flow of traffic has been a top priority for street design, which has increasingly yielded streets designed for car travel, not pedestrians.

Over the decades, these and other related factors shaped the urban environment of many communities. Often a community's unique "sense of place" has been diminished—or, in many new communities, was never achieved in the first place.

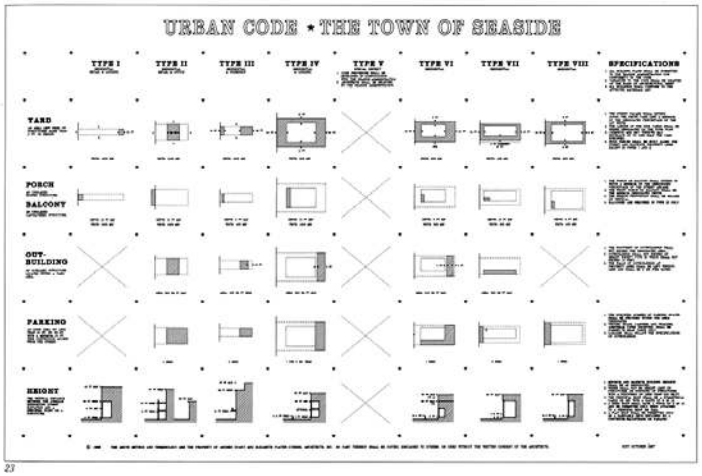
In general, conventional zoning:

- Separates uses related to daily activity, such as home, school, and work.
- Frequently promotes low-density development and relatively limited housing choices.
- Often encourages excessive land consumption and automobile dependency.
- Ends up focusing on what uses are not allowed, rather than encouraging what the community actually wants.
- Applies standards and design requirements generically, in a "one-size-fits-all" manner, throughout the entire community.
- Uses regulations such as floor area ratio, which can shape the form of development in ways that are hard to visualize beforehand and may encourage developers to "max out" the massing of a building within allowed limits, often at the expense of its architectural detailing and sensitivity to existing context.
- Regulates private development, but typically not the design or character of the streets that serve it. This usually leaves development of standards to the city engineer or public works department, which tend to focus on accommodating automobile traffic.

Ultimately, development and street standards in conventional zoning often do not promote the type of development envisioned by a community's comprehensive plan, and even when created with the best of intentions, they can undermine the very plans they are supposed to support.

Form-Based Codes

In the 1980s, a group of planners and architects sought to create an alternative to conventional zoning, focused less on use and more on scale, intensity of development, the shape of public spaces, and the interrelationships between buildings. During this period, the design firm Duany Plater-Zyberk & Company drafted what was effectively the first modern form-based code to guide the development of Seaside, Florida, a new community based on traditional neighborhood design principles. A radical departure from conventional zoning, the entire "Urban Code" for Seaside was graphically presented on one poster.



Urban Code (1986), Town of Seaside, Florida.
Credit: Duany Plater-Zyberk & Company.

But what are form-based codes? Form-based codes are a method of development regulation, adopted into municipal or county law, that emphasizes the physical character of development (its form) and includes—but often de-emphasizes—the regulation of land uses. As in a conventional zoning ordinance, land uses are regulated, but land use is typically regulated more broadly, with land use categories in lieu of long lists of specific permitted uses.

A form-based code focuses on how development relates to the context of the surrounding community, especially the relationships between buildings and the street, pedestrians and vehicles, and public and private spaces. The code addresses these concerns by regulating site design, circulation, and overall building form.

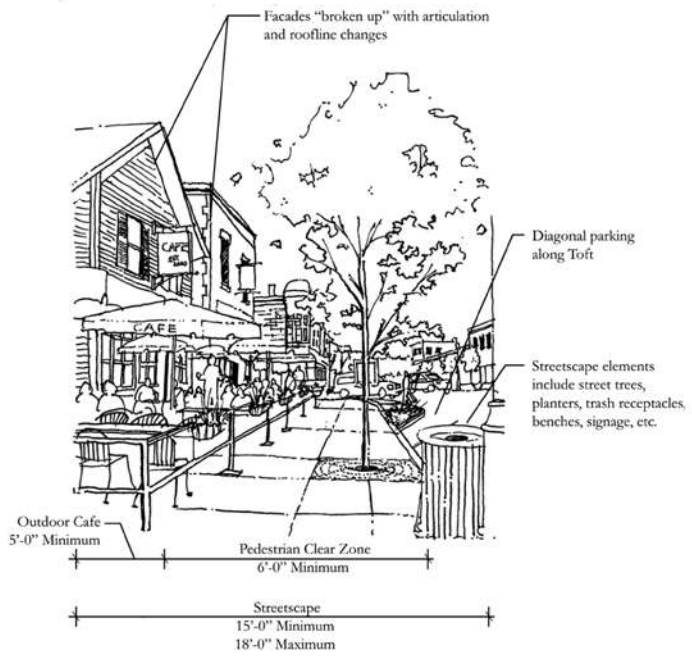
Due to this emphasis on design, form-based codes usually provide greater predictability about the visual aspects of development, including how well it fits in with the existing context of the community. They offer a community the means to create the physical development it wants and developers a clearer understanding of what the community seeks. Over time, these benefits can foster greater community acceptance of new development.

A form-based code can be customized to the vision of any community, including preserving and enhancing the existing character of one neighborhood or dramatically changing and improving the character of another. Typically, they do both.

But how do form-based codes differ from conventional zoning? In general, a form-based code:

- Encourages a mix of land uses, often reducing the need to travel extensively as part of one's daily routine.
- Promotes a mix of housing types.
- Is "proactive," focusing on what the community wants and not what it dislikes.
- Results from a public design process, which creates consensus and a clear vision for a community, to be implemented by the form-based code.
- Tailors the requirements to fit specific places or neighborhoods by reflecting local architecture and overall character.
- Emphasizes site design and building form, which will last many years beyond specific numerical parameters such as density and use regulations that are likely to change over time.
- Addresses the design of the public realm and the importance that streetscape design and individual building character have in defining public spaces and a special "sense of place."
- Provides information that is easier to use than conventional zoning codes because it is shorter, more concise, and emphasizes illustrations over text.

Figure 3.22: Toft Avenue redevelopment and streetscape improvements



Toft Avenue improvements, Downtown Form-Based Code (2010), Village of Antioch, Illinois.
Credit: The Lakota Group.

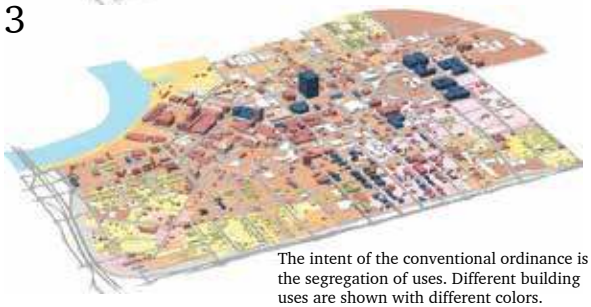
1 CONVENTIONAL DEVELOPMENT ILLUSTRATED

Current zoning ordinance map

2

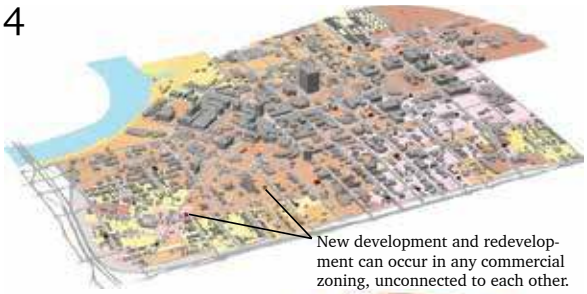
Current zoning ordinance map with existing buildings

3



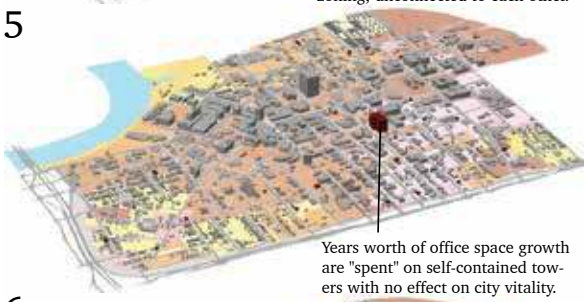
The intent of the conventional ordinance is the segregation of uses. Different building uses are shown with different colors.

4



New development and redevelopment can occur in any commercial zoning, unconnected to each other.

5



Years worth of office space growth are "spent" on self-contained towers with no effect on city vitality.

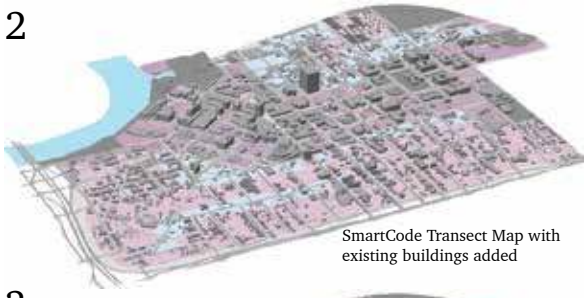
6

Isolated new commercial uses and self-contained towers do not contribute to the creation of complete neighborhoods.

1 SMARTCODE DEVELOPMENT ILLUSTRATED

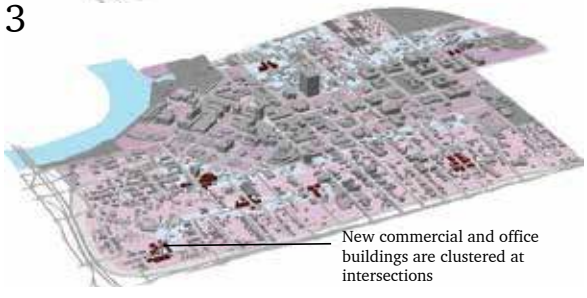
SmartCode Transect Map

2



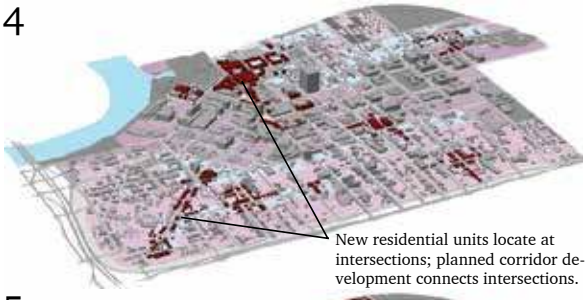
SmartCode Transect Map with existing buildings added

3



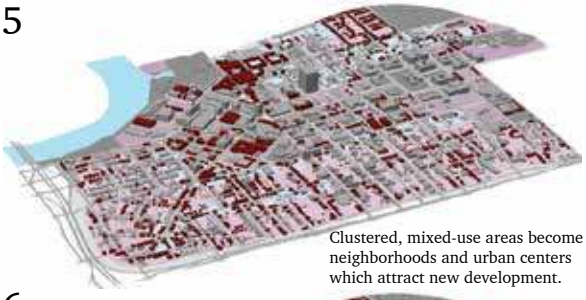
New commercial and office buildings are clustered at intersections

4



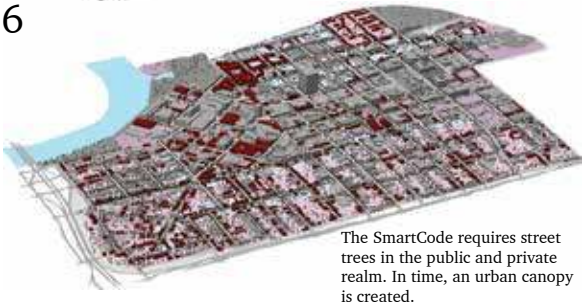
New residential units locate at intersections; planned corridor development connects intersections.

5



Clustered, mixed-use areas become neighborhoods and urban centers which attract new development.

6



The SmartCode requires street trees in the public and private realm. In time, an urban canopy is created.

Comparison of typical development patterns under conventional zoning and the SmartCode form-based code template, Downtown Montgomery Plan (2007), City of Montgomery, Alabama. Credit: Dover, Kohl & Partners.

Should Your Community Adopt a Form-Based Code?

Before embarking on the creation of a form-based code, a community needs to carefully consider whether a form-based code is the right tool to achieve community goals for the built environment.

Current regulations may be sufficient. A key indicator is whether the community has experienced a substantial amount of new development in recent years and if there is broad satisfaction with the built environment of a community (buildings, streets, public spaces, etc.). It is common for residents to express high satisfaction with their community's built environment when it has remained largely unchanged over several decades, often the result of strict preservation laws or low demand for new development.

A Means of Preservation and Transformation

If current regulations are not sufficient, form-based codes can preserve what residents love about the physical character of their community, ensuring that future development is in harmony with existing context or facilitating varying degrees of change. Either way, the main purpose of a form-based code is to proactively regulate the physical form and character of new development so that the community gets what it wants, rather than reacting to those elements of each development proposal on a piecemeal basis (or not at all).

It should be noted that while conventional architectural standards can be effective at preserving context, they are often applied subjectively. In addition, some architectural standards lack the necessary scope of regulation, leading to unforeseen consequences, such as new development that follows the letter of the law but only superficially fits in with existing context. For example, architectural standards may permit the construction of an outsized, modern building on a lot located between two historic cottages once the developer agrees to paste decorative shutters on the building's facade. Form-based codes are typically more comprehensive and directly address the aspects of building form that most impact the relationship between buildings and the public realm as a whole.

An Adaptable Approach

Form-based codes are not "one-size-fits-all," but are tailored to the local context, objectives, and means of each community. These considerations include the community's existing physical character and goals for preservation or transformation, as well as its local political landscape and what financial and staff resources are available to support the effort.

Increasing Predictability, Lowering Risk, and Expanding Options for Developers

Nevertheless, it is common for municipalities to be wary of adopting new development regulations, especially in difficult economic times. Although the adoption of any new form-based code will require developers, not to mention municipalities, to learn a new system of development regulation, comprehensive form-based codes have the potential to encourage and facilitate development more effectively than conventional regulations. Form-based codes are often easier to follow than conventional codes and ultimately more comprehensive, providing municipalities and potential developers with a system that, once learned, is more transparent, predictable, and thorough. As an added benefit, the need for review by a discretionary body such as a planning commission or design review board is often eliminated.

In addition, form-based codes typically—but not always—reduce regulation of what uses are allowed within buildings. This can expand the potential market for new development and result in structures that are more adaptable to different kinds of tenants, today and throughout the evolution of the community over many decades.

Photo simulation of proposed changes to Sheridan Road, Heart of Peoria Land Development Code (2007), Peoria, Illinois. Credit: Urban Advantage (www.urban-advantage.com).

Different Methods

There are many approaches to creating a form-based code. Nevertheless, most methods share many of the same steps and specific practices. The Form-Based Codes Institute (FBCI, www.formbasedcodes.org), led by Carol Wyant (who first coined the term "form-based codes"), is a non-profit professional organization dedicated to advancing the understanding and use of form-based codes. FBCI offers an introductory webinar on the "ABCs of Form-Based Codes" and advanced, two-day courses on creating, adopting, and administering form-based codes.

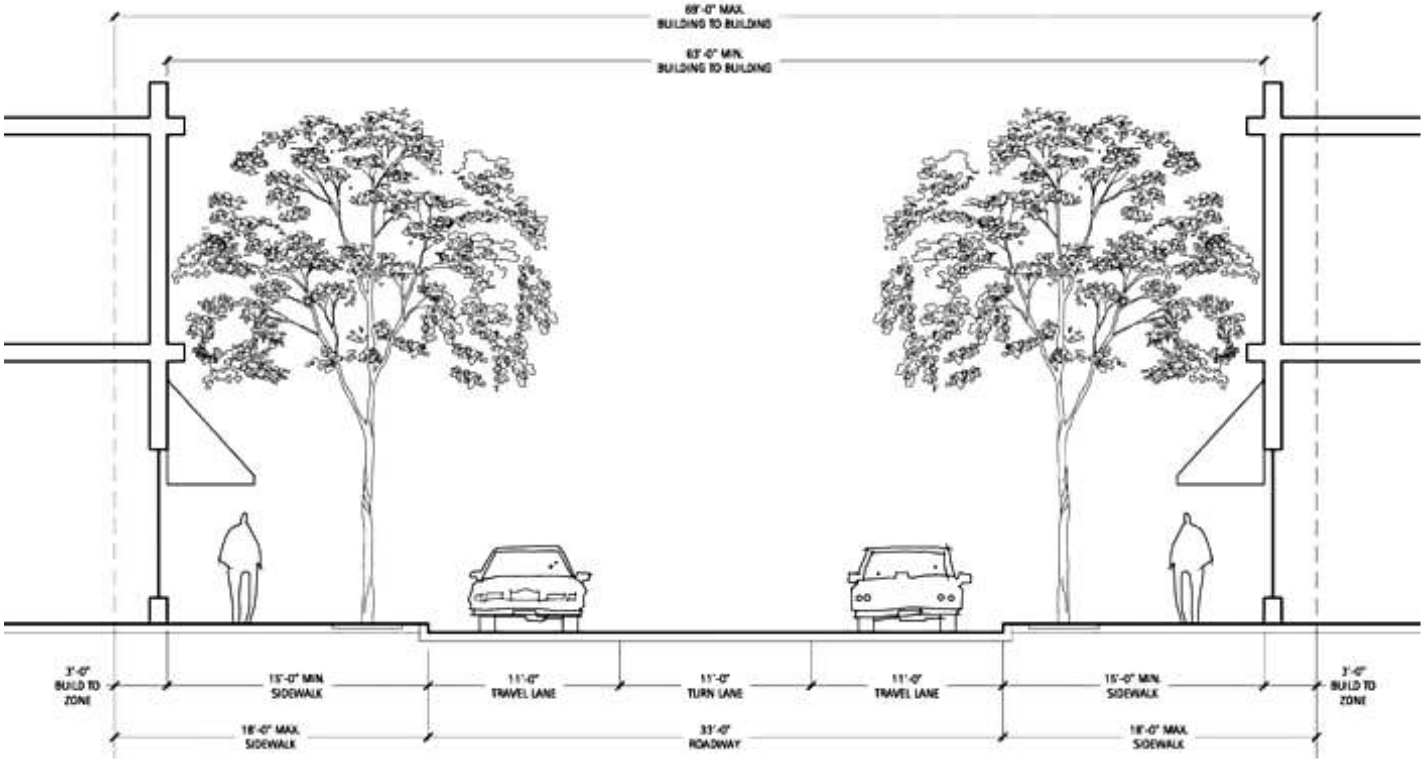
Architects Daniel and Karen Parolek of Opticos Design, Inc. are both on the FBCI Board of Directors and frequently serve as instructors for FBCI's courses and webinars. Drawing upon years of experience developing award-winning form-based codes for communities across the nation, they wrote (with Paul Crawford) the influential textbook *Form-Based Codes: A Guide for Planners, Urban Designers, Municipalities, and Developers* (2008), which offers a highly-detailed, comprehensive process for creating a form-based code that impressively incorporates established best practices.

Their process may differ from that used by many consulting firms specializing in form-based codes, who often follow a highly customized process they've crafted over the years. But in order to provide municipalities in our region with an idea of what the creation of a form-based code could entail, a synopsis of the steps recommended by the authors follows. The steps include:

Step 1: Scoping defines the area of the community to be addressed through the form-based code and the extent to which form-based codes interact with existing regulations.

Step 2: Assessing Existing Conditions documents and analyzes the community's existing urban form at different scales, providing a basis for the creation of the form-based code.

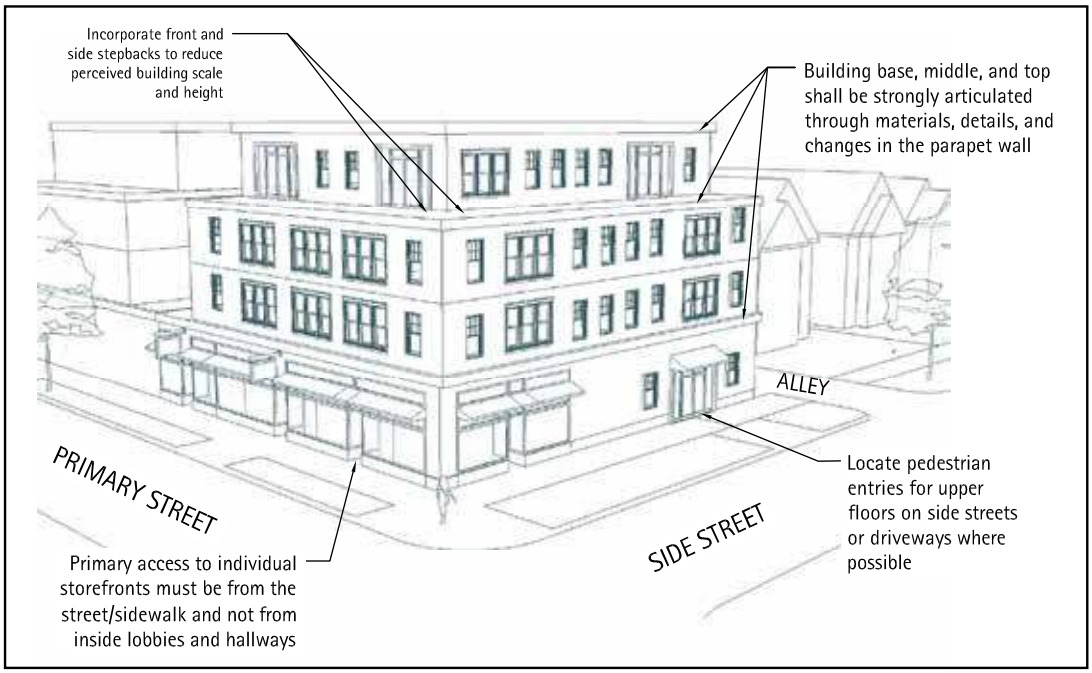
Step 3: Visioning and Creating Regulations defines the community's vision for its future and determines the specific regulations and procedures of the form-based code.



Thoroughfare standards for Orchard Street in Transitional Core District, Downtown Form-Based Code (2010), Village of Antioch, Illinois. Credit: The Lakota Group.

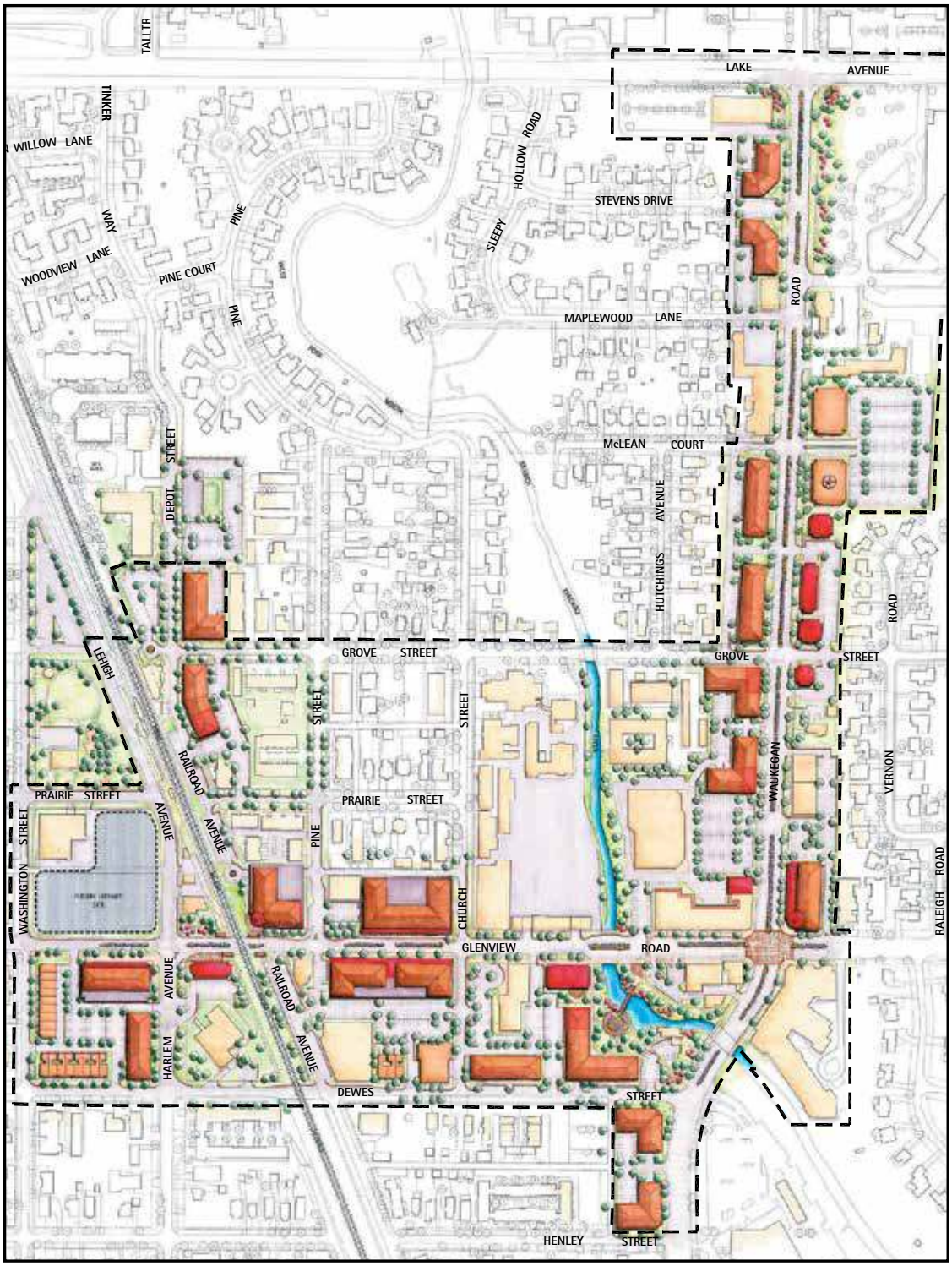
4.6.1 Mixed Use

Figure 4.1: Mixed-use Building on Corner Lot



Example of mixed-use building on corner lot with articulated architecture.

Design standards for mixed-use, Downtown Development Code (2008), Village of Glenview, Illinois. Credit: The Lakota Group.



Downtown Revitalization Plan (2006), Village of Glenview, Illinois. Credit: The Lakota Group.

Step One
Scoping

Once a municipality chooses to develop a form-based code, there are several questions the community will need to carefully consider at the beginning of the process, such as:

What staff should be involved?

How much help will we need from consultants?

Should the new form-based code cover the whole community, or just part of it?

How much change do we want?

The answers to these essential questions will determine the scope of the form-based code.

Who Should Be Involved?

Form-based codes address both the short- and long-term interests of several specialized areas. Therefore, it is vital to assemble a diverse team to lead the creation of the form-based code. Typically, this code team is composed of municipal staff with consultant assistance, frequently with the consultant team responsible for guiding the effort and completing the majority of tasks required by the planning process.

Photo simulation of proposed changes to Dexter Avenue, Downtown Montgomery Plan (2007), City of Montgomery, Alabama. Credit: Urban Advantage (www.urban-advantage.com).

Testing the Waters

Some municipalities may choose to first create a form-based code for a limited area before applying the techniques to more extensive areas or to the entire municipality. This may be due to uncertainty among elected officials and residents or a desire to create a pilot project that will provide an opportunity for municipal staff and elected officials to gain experience.

Municipal Staff

Key municipal departmental staff are essential to the creation of the form-based code, participating—at a minimum—in an initial assessment of the existing zoning regulations, community visioning sessions and workshops, and code drafting and review. Departments that typically participate include planning, public works, parks and recreation, economic development, police, and fire.

Consultant Assistance

Consultants are typically engaged to augment the expertise of the municipal staff and often to lead the effort. These consultants are usually planners, architects, or urban designers. Depending on the focus and objectives of the form-based code effort, the consultant team could also draw on expertise from disciplines such as transportation planning, market analysis, historic preservation, legal support, and public participation. FBCI provides sample Request for Qualifications (RFQs) and RFPs at www.formbasedcodes.org.

Define Your Form-Based Codes Area

Form-based codes can be applied at a variety of scales. Examples include:

- Sub-areas within a municipality:
  - Downtowns
  - Deteriorating strip commercial corridors
  - "Dead" big-box shopping centers
  - One or more undeveloped "greenfield" areas adjacent to a municipality that are intended to accommodate growth
  - Existing neighborhoods or other developed areas where infill development is intended to preserve or extend existing patterns of physical character
- Entire municipalities
- Counties or regions that include both urban areas and countryside
- Areas that have been targeted for economic revitalization, are undergoing changes in land ownership, or are the location of planned infrastructure improvements

Planning Process

Form-based codes are typically created by integrating a planning process with the drafting of specific rules for development. Communities will need to take into consideration the timing of the most recent comprehensive plan update and whether the update included sufficient engagement with the community and urban design specifications in the plan, as well as the amount of funding available for the development of the form-based code.

Relationship with Existing Regulations

There are several different methods for introducing form-based codes into an established zoning ordinance. Their suitability often depends upon the degree of change that is desired by the community and a realistic assessment of political feasibility.

Comprehensive Replacement of Existing Code

The form-based code replaces the existing conventional zoning code for all or part of a community, and all development within the area must abide by the regulations of the form-based code. This approach generally offers the widest range of opportunities for transforming a targeted area of a community while maintaining established character in others. It also offers the advantage of consistency in regulatory vocabulary and procedures throughout the code.

Hybrid Zoning Code

A hybrid code is one that combines form-based zoning districts, and potentially other form-based standards, with a conventional zoning approach. Form-based standards can be merged with the existing conventional code or created in conjunction with new conventional zoning standards. A hybrid code can take the form of a chapter within the code, similar to a special district or overlay. The hybrid form-based code is cross-referenced to other sections of the pre-existing code for selected development standards, such as parking dimensions or landscaping standards. Areas that fall within the form-based code boundaries are rezoned to new zoning districts per the code. Within these areas, any and all development must abide by the new regulations for the form-based zones. This approach can be used for a sub-area in the phased replacement of an existing code, and can also be an effective way of responding to pressure for physical change in "sensitive" areas of the community.

Optional/Parallel Code

The form-based code is created as a standalone code but does not replace the existing conventional zoning code. Instead, in specific areas defined in the form-based code, the developer is given the choice to build under the existing conventional zoning or the new form-based code. The property does not have to be rezoned, but once the developer chooses a code, the entire development project must abide by it.

There are advantages to this approach, but the challenges of administering even a single zoning code are significant, and two codes may create confusion about the community's commitment to the requirements and principles reflected in the form-based code. It may also result in developers attempting to pick and choose only those form-based code requirements that are most beneficial to their interests.

Organizing Principle

There are many different approaches to regulating the type, scale, form, and intensity of allowable development in a form-based code. Some common approaches are explained below, but it is important to note that any consulting firm that specializes in form-based codes is likely to have its own individualized approach.

Transect-Based Codes

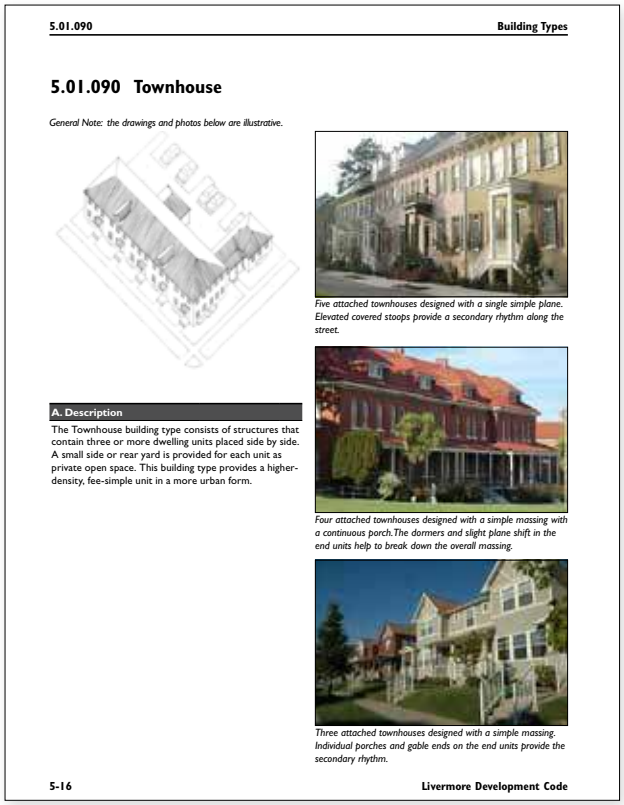
Many form-based codes are organized using the concept of a rural-to-urban "transect," in which zones are primarily classified by the physical intensity of the built form, the relationship between nature and the built environment, and the complexity of uses within the zone (please see diagram below explaining the concept). This allows for a gradual transition between different areas in a community. Applying the concept of the transect to a particular planning area often results in a modified version that responds to local conditions; indeed, this is how the transect-based SmartCode, a form-based code template, functions (an explanation of the SmartCode is provided on the following page).

Building Type-Based Codes

In this common approach, the form-based code is organized through different building types, each defined by specific development standards regulating the configurations, features, and functions of buildings. The building types and their accompanying development standards are applied to different blocks and districts within the planning area.

This approach is thought to work best in smaller planning areas, especially infill development, where the compatibility of new development with existing buildings is a high priority. In this scenario, the use of building types can reinforce the existing character of a community.

The Transect.
Credit: Topografis PC.



5.01.090 Building Types

5.01.090 Townhouse

General Note: the drawings and photos below are illustrative.

A. Description

The Townhouse building type consists of structures that contain three or more dwelling units placed side by side. A small side or rear yard is provided for each unit as private open space. This building type provides a higher-density, fee-simple unit in a more urban form.

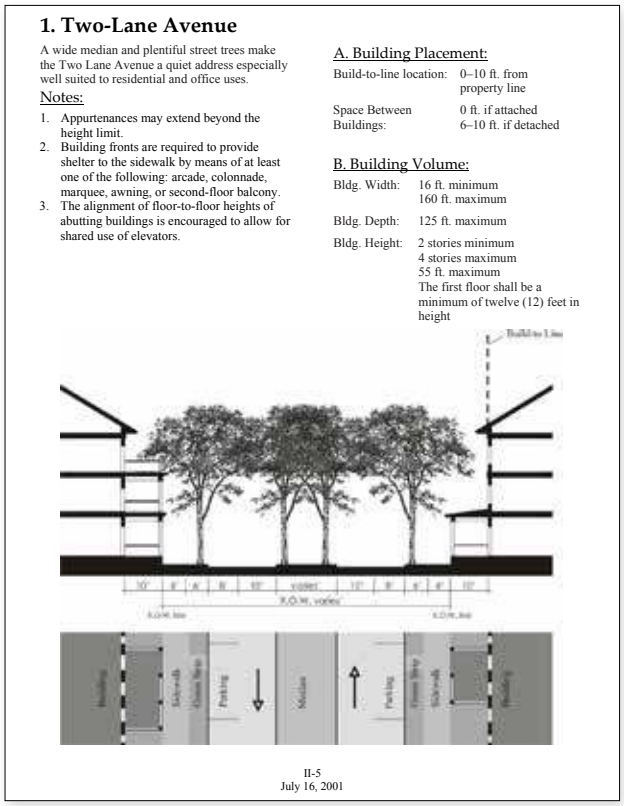
Five attached townhouses designed with a single simple plane. Elevated covered stoops provide a secondary rhythm along the street.

Four attached townhouses designed with a simple massing with a continuous porch. The dormers and slight plane shift in the end units help to break down the overall massing.

Three attached townhouses designed with a simple massing. Individual porches and gable ends on the end units provide the secondary rhythm.

5-16 Livermore Development Code

Building Types: Townhouse, Development Code (2010), City of Livermore, California. Credit: Opticos Design, Inc.



1. Two-Lane Avenue

A wide median and plentiful street trees make the Two Lane Avenue a quiet address especially well suited to residential and office uses.

Notes:

1. Appurtenances may extend beyond the height limit.
2. Building fronts are required to provide shelter to the sidewalk by means of at least one of the following: arcade, colonnade, marquee, awning, or second-floor balcony.
3. The alignment of floor-to-floor heights of abutting buildings is encouraged to allow for shared use of elevators.

A. Building Placement:

Build-to-line location:	0–10 ft. from property line
Space Between Buildings:	0 ft. if attached 6–10 ft. if detached

B. Building Volume:

Bldg. Width:	16 ft. minimum 160 ft. maximum
Bldg. Depth:	125 ft. maximum
Bldg. Height:	2 stories minimum 4 stories maximum 55 ft. maximum The first floor shall be a minimum of twelve (12) feet in height

II-5
July 16, 2001

Street Types: Two-Lane Avenue, Central Hercules Plan (2001), City of Hercules, California. Credit: Dover, Kohl & Partners.

Street-Based Codes

Street-based codes are form-based codes that are organized by different street types, such as boulevards, arterials, and collectors. Each street type is defined by the level of traffic the roadway is designed to accommodate, design speeds, pedestrian crossing times, the width of vehicle lanes and sidewalks, the configuration of on-street parking, the presence of medians bicycle lanes, and other factors, including how buildings are required to address the street (in terms of height, frontage type, and build-to lines). Street-based codes are typically illustrated using section drawings.

Template Codes

A form-based code can be designed and developed locally from scratch or based on a predetermined "template" that has been used elsewhere and can be customized to serve local needs.

SmartCode

The most notable currently available code template is the SmartCode. It was originally created by the architectural firm of Duany Plater-Zyberk & Company and has since undergone continual refinement by the firm, other planning and design professionals, and communities that have used the code.

The SmartCode is a comprehensive, transect-based form-based code template (or "model ordinance") that includes model language, standards, and requirements for multiple scales of development by public and private sectors, as well as administrative procedures for development review and approval. It is intended to be customized to the local context, priorities, and legal requirements of each community that uses it.

It has been used by several communities across the U.S., and in its largest implementation to date, it was used as the basis for the new development code for the City of Miami, Florida.

Considerations for Templates

If the form-based code will apply to an area composed of only one transect level, a transect-based approach such as the SmartCode may not be necessary. Also consider the extent to which local officials (particularly municipal attorneys) are confident that the template can be sufficiently calibrated to and customized to comply with applicable state law requirements, including consistency with the municipality's comprehensive plan.

Other templates

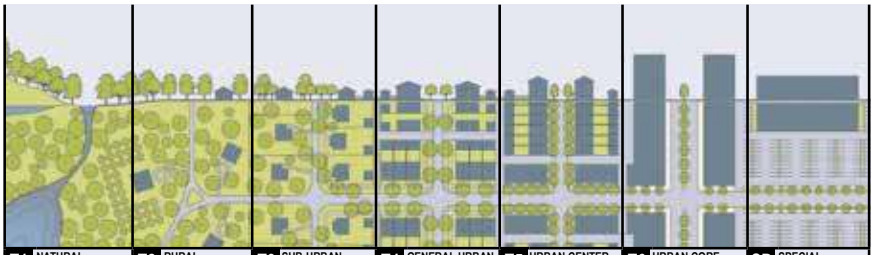
Consultant teams that have prepared more than a few form-based codes are likely to have developed at least one form-based code template. If the consultant team is based in the region, it is likely that their template will likely be customized to the local context and legal requirements of the municipality.

TABLE 14. SMARTCODE SUMMARY

SMARTCODE

Municipality

Note: All requirements in this Table are subject to calibration for local context.

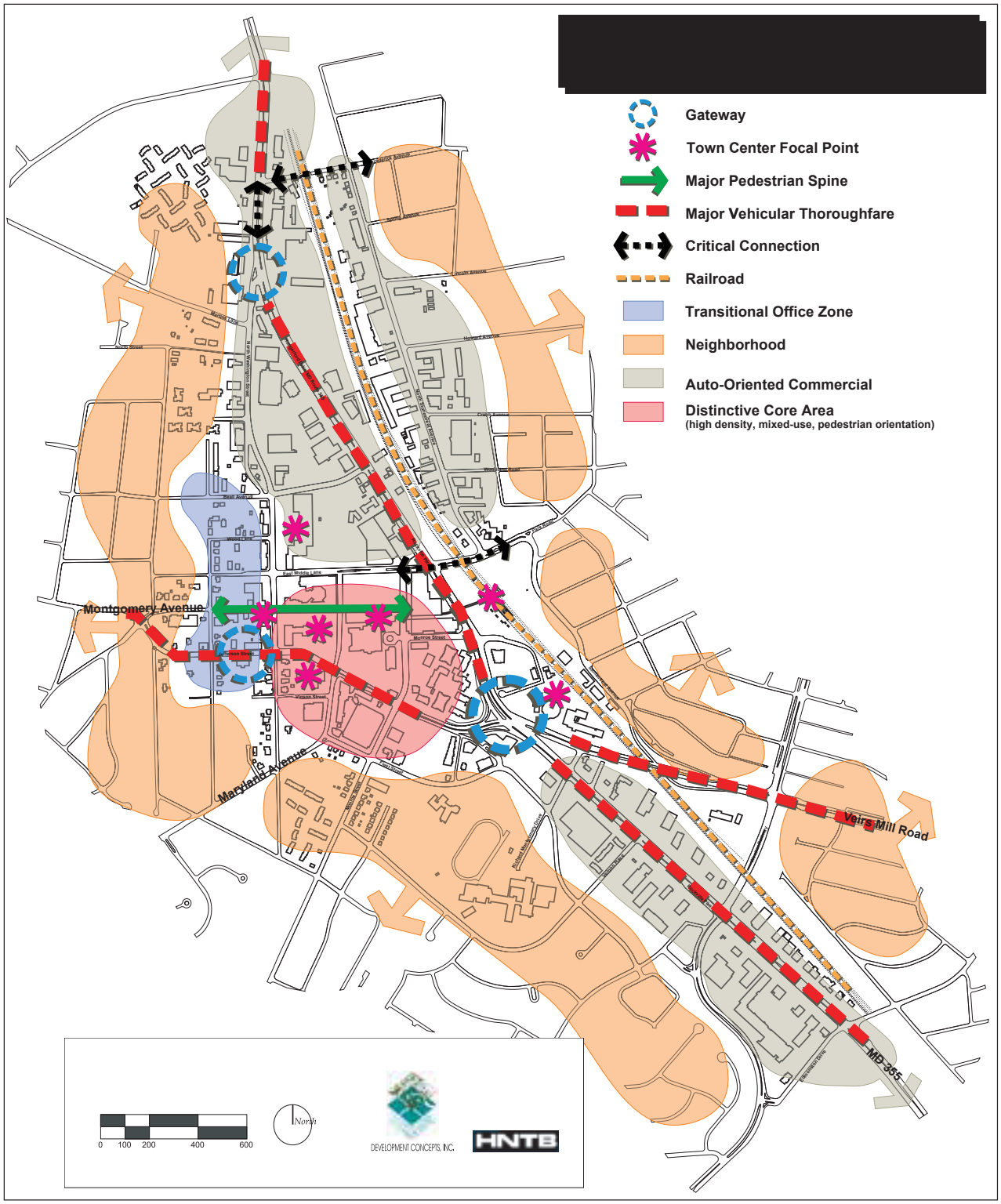


	T1 NATURAL ZONE	T2 RURAL ZONE	T3 SUB-URBAN ZONE	T4 GENERAL URBAN ZONE	T5 URBAN CENTER ZONE	T6 URBAN CORE ZONE	SD SPECIAL DISTRICT	
a. ALLOCATION OF ZONES per Pedestrian Shed (applicable to Article 3 only)							(see Table 16)	
CLD requires	no minimum	50% min	10 - 30%	20 - 40%	not permitted	not permitted		
TND requires	no minimum	no minimum	10 - 30%	30 - 60 %	10 - 30%	not permitted		
RCD requires	no minimum	no minimum	not permitted	10 - 30%	10 - 30%	40 - 80%		
b. BASE RESIDENTIAL DENSITY (see Section 3.4)								
By Right	not applicable	1 unit / 20 ac avg.	2 units / ac. gross	4 units / ac. gross	6 units / ac. gross	12 units / ac. gross		
By TDR	by Variance	by Variance	6 units / ac. gross	12 units / ac. gross	24 units / ac. gross	96 units / ac. gross		
Other Functions	by Variance	by Variance	10 - 20%	20 - 30%	30 - 50%	50 - 70%		
c. BLOCK SIZE								
Block Perimeter	no maximum	no maximum	3000 ft. max	2400 ft. max	2000 ft. max	2000 ft. max *		
d. THOROUGHFARES (see Table 3 and Table 4)						* 3000 ft. max with parking structures		
HW	permitted	permitted	permitted	not permitted	not permitted	not permitted		
BV	not permitted	not permitted	permitted	permitted	permitted	permitted		
AV	not permitted	not permitted	permitted	permitted	permitted	permitted		
CS	not permitted	not permitted	not permitted	not permitted	permitted	permitted		
DR	not permitted	not permitted	permitted	permitted	permitted	permitted		
ST	not permitted	not permitted	permitted	permitted	permitted	not permitted		
RD	permitted	permitted	permitted	not permitted	not permitted	not permitted		
Rear Lane	permitted	permitted	permitted	permitted	not permitted	not permitted		
Rear Alley	not permitted	not permitted	permitted	required	required	required		
Path	permitted	permitted	permitted	permitted	not permitted	not permitted		
Passage	not permitted	not permitted	permitted	permitted	permitted	permitted		
Bicycle Trail	permitted	permitted	permitted	not permitted *	not permitted	not permitted		
Bicycle Lane	permitted	permitted	permitted	permitted	not permitted	not permitted		
Bicycle Route	permitted	permitted	permitted	permitted	permitted	permitted		
e. CIVIC SPACES (see Table 13)						* permitted within Open Spaces		
Park	permitted	permitted	permitted	by Warrant	by Warrant	by Warrant		
Green	not permitted	not permitted	permitted	permitted	permitted	not permitted		
Square	not permitted	not permitted	not permitted	permitted	permitted	permitted		
Plaza	not permitted	not permitted	not permitted	not permitted	permitted	permitted		
Playground	permitted	permitted	permitted	permitted	permitted	permitted		
f. LOT OCCUPATION								DISPOSITION
Lot Width	not applicable	by Warrant	72 ft. min 120 ft. max	18 ft. min 96 ft. max	18 ft. min 180 ft. max	18 ft. min 700 ft. max		
Lot Coverage	not applicable	by Warrant	60% max	70% max	80% max	90% max		
g. SETBACKS - PRINCIPAL BUILDING (see Table 15)								
(g.1) Front Setback (Principal)	not applicable	48 ft. min	24 ft. min	6 ft. min 18 ft. max	2 ft. min 12 ft. max	2 ft. min 12 ft. max		
(g.2) Front Setback (Secondary)	not applicable	48 ft. min	12 ft. min	6 ft. min 18 ft. max	2 ft. min 12 ft. max	2 ft. min 12 ft. max		
(g.3) Side Setback	not applicable	96 ft. min	12 ft. min	0 ft. min	0 ft. min 24 ft. max	0 ft. min 24 ft. max		
(g.4) Rear Setback	not applicable	96 ft. min	12 ft. min	3 ft. min *	3 ft. min *	0 ft. min		
Frontage Buildout	not applicable	not applicable	40% min	60% min	80% min	80% min		
h. SETBACKS - OUTBUILDING (see Table 15)								
(h.1) Front Setback	not applicable	20 ft. min +bldg setback	20 ft. min +bldg setback	20 ft. min +bldg setback	40 ft. max from rear prop	not applicable		
(h.2) Side Setback	not applicable	3 ft. or 6 ft.	3 ft. or 6 ft.	0 ft. min or 3 ft.	0 ft min	not applicable		
(h.3) Rear Setback	not applicable	3 ft. min	3 ft. min	3 ft.	3 ft. max	not applicable		
i. BUILDING DISPOSITION (see Table 9)								
Edgeyard	permitted	permitted	permitted	permitted	not permitted	not permitted		
Sideyard	not permitted	not permitted	not permitted	permitted	permitted	not permitted		
Rearyard	not permitted	not permitted	not permitted	permitted	permitted	permitted		
Courtyard	not permitted	not permitted	not permitted	not permitted	permitted	permitted		
j. PRIVATE FRONTAGES (see Table 7)								CONFIGURATION
Common Yard	not applicable	permitted	permitted	not permitted	not permitted	not permitted		
Porch & Fence	not applicable	not permitted	permitted	permitted	not permitted	not permitted		
Terrace or Dooryard	not applicable	not permitted	not permitted	permitted	permitted	not permitted		
Forecourt	not applicable	not permitted	not permitted	permitted	permitted	permitted		
Stoop	not applicable	not permitted	not permitted	permitted	permitted	permitted		
Shopfront & Awning	not applicable	not permitted	not permitted	permitted	permitted	permitted		
Gallery	not applicable	not permitted	not permitted	permitted	permitted	permitted		
Arcade	not applicable	not permitted	not permitted	not permitted	permitted	permitted		
k. BUILDING CONFIGURATION (see Table 8)								
Principal Building	not applicable	2 Stories max	2 Stories max	3 Stories max, 2 min	5 Stories max, 2 min	8 Stories max, 2 min		
Outbuilding	not applicable	2 Stories max	2 Stories max	2 Stories max	2 Stories max	not applicable		
l. BUILDING FUNCTION (see Table 10 &Table 12)								FUNCTION
Residential	not applicable	restricted use	restricted use	limited use	open use	open use		
Lodging	not applicable	restricted use	restricted use	limited use	open use	open use		
Office	not applicable	restricted use	restricted use	limited use	open use	open use		
Retail	not applicable	restricted use	restricted use	limited use	open use	open use		
	ARTICLE 5							
	ARTICLE 2, 3, 4							

SC42

SmartCode Version 9.2

Summary of sample SmartCode requirements (intended to be calibrated to the context and needs of each community). Credit: Duany Plater-Zyberk & Company.



Existing Framework, Town Center Master Plan (2001), City of Rockville, Maryland. Credit: Development Concepts, Inc./HNTB.

Step Two
Assessing Existing Conditions

A form-based code guides development to build upon and strengthen the unique characteristics of a community, helping to preserve desired character. Before a form-based code is created, the code team identifies these unique characteristics by documenting and analyzing the community's existing urban form at different scales, from the broad characteristics of a community's neighborhoods to the specific architectural details of windows on typical houses within each neighborhood. The information gathered during this phase is organized and analyzed to provide a basis for the creation of the form-based code.

It should be noted that the following approach to documenting and analyzing existing conditions is not standardized, so a variety of approaches are possible. Many form-based code consultants choose a different process, such as documenting large and small scale elements simultaneously, rather than in two phases.

Community Sub-Areas

Site visit, Downtown Montgomery Plan (2007), City of Montgomery, Alabama. Credit: Dover, Kohl & Partners.

Documenting the existing conditions of a community's sub-areas helps the code team understand the composition of the community at a larger scale. Some common sub-areas that can be identified include:

Neighborhoods, which usually are areas that contain blocks or buildings that are unified in character or style. A neighborhood is often walkable and may have a clearly defined center or edge.

Districts, which are areas typically defined by a particular use or activity, such as light industrial districts.

Corridors, which can be man-made elements relating to movement, such as roads or railways, or natural elements such as rivers. Whether man-made or natural, these corridors often define boundaries within and between neighborhoods. However, roads that function as commercial corridors often serve as the center of many communities.

Preparation

Reviewing Background Documents

With the help of municipal staff, the code team should gather existing background documents, such as maps and past plans, for the area. These documents provide immediate context for the code team's analysis and will help them develop a form-based code that accommodates and works with existing regulations that will remain in effect after the form-based code is implemented. In addition, it is important for the code team to review any regulations that are being replaced in order to help understand the existing place and to learn from those regulations' successes and failures. Similarly, studying past plans can help the team to incorporate any previous visioning work that was completed by the community prior to the form-based code process.

Mapping Existing Conditions

To understand existing conditions and select areas to focus on during the site visit, the code team may create an existing conditions map with information such as public right-of-way lines, lot lines, building footprints, curbs and sidewalk locations, existing land uses, parking location, and natural features (such as rivers) that will impact development.

Analyzing Existing Conditions Maps

Existing conditions maps can be marked in response to any of the following questions:

- *Where are the centers or focal points?*
- *Which streets and roadways are regional connectors? Which are local connectors?*
- *Where are the green or pedestrian corridors?*
- *Which areas are currently slated for major changes in scale and/or use?*
- *Which places define the community's identity? Are historic developmental patterns intact in any of these places?*
- *Where do building and street patterns change and what might be the reason?*
- *Which neighborhoods would benefit from the preservation of their existing character?*
- *Are there any districts that are expressly zoned for a particular use or activity, such as light industry?*
- *Are there clear edges and transitions between neighborhoods?*
- *Which transect levels exist within the community?*

The code team will review these maps, looking for patterns and marking up the maps with the existing neighborhood, district, and corridor framework of the community. In addition, the team will usually mark the map in response to questions about the physical form of the community (please see inset above). If the team anticipates a transect-based form-based code (see page 17), it might begin to make an initial list of transect levels that are likely to be included in the form-based code.

Site Visit

Members of the code team will often visit the study area to determine the centers and boundaries of any neighborhoods, districts, and corridors, then mark them on a map (such as an existing conditions map created before the site visit).

Neighborhoods

For neighborhoods, the code team will often try to locate its center (which is a crossroad, commercial center, school, government building, or park) as well as its outer boundary (typically a street, rail line, or creek). The team is likely to take photographs intended to illustrate the physical character of each neighborhood; these photographs may be used later on to help the team determine which transect level is applicable to the neighborhood. The code team is likely to make an initial assessment of how much each neighborhood should change (such as "preserve," "preserve and enhance," "evolve," and "transform"). If relevant to the project, the team may note potential locations for new neighborhoods and neighborhood centers.

Districts
The code team usually will also mark any identified districts (on the existing conditions map, or equivalent), and take photographs of the area. If there are any districts, the team should assess the relationship of each district to the community, determining whether it is a healthy component of the community (such as an educational campus), an incompatible-use district (such as a heavy industrial area), or an area unnecessarily zoned as a district (such as single-use districts that could be appropriately placed within a mixed-use district). In addition, the team should consider whether each necessary district will need to expand in the future.

Corridors
The code team may also mark the location of any corridors, such as important roads, trails, or streams, and consider how the corridor is functioning as an element of the built environment and whether there is a balance between auto and pedestrian traffic.

Special Conditions
The team will usually note any other unique larger elements of the area, such as topography.

Organizing the Data
According to a methodology that is most helpful to them, the code team may create a series of spreadsheets, diagrams, or maps to organize the information from the site visit. Some teams may find it helpful to compile the data from all maps and diagrams onto a single summary diagram (some firms refer to this as an "existing framework diagram").

If developing a transect-based form-based code, the team will likely review the summary diagram for the various transect levels noted for each neighborhood during the first round of site visits. Any photographs taken during the site visit will usually be organized by transect level. The code team may then create an "existing transect diagram," which includes all neighborhoods and indicates which transect levels are found in each, usually illustrated by photographs from the site visits.

Smaller Scale Details
Documenting the existing conditions of smaller scale details provides dimensional measurements for the first draft of the form-based code, which will then be modified during the visioning and coding phases. Some of the basic elements to be documented by the code team are buildings (form, placement, frontages, types, and use), thoroughfares, lots and blocks, civic spaces (parks and plazas), and additional elements (such as architecture or landscaping) as desired by the community.

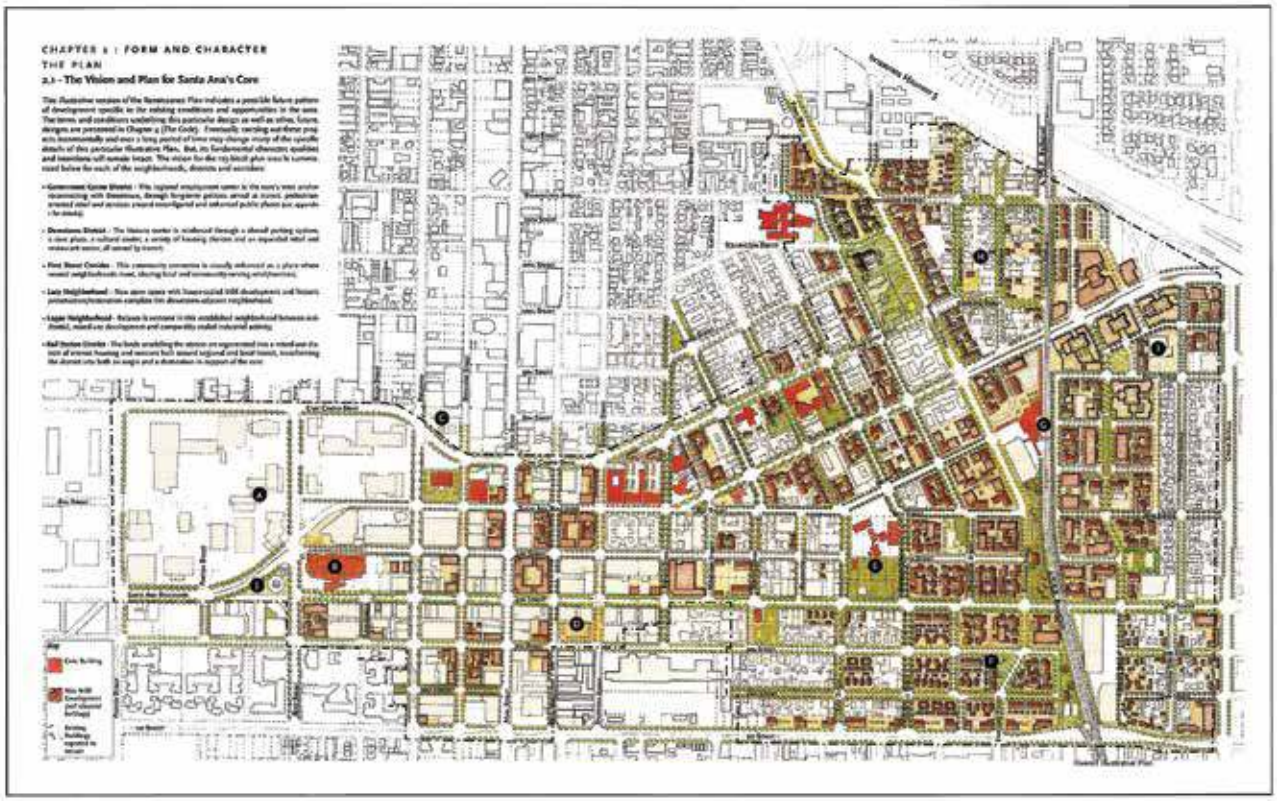
Preparation
Choosing Sampling Areas
To document the community at a smaller scale, the code team will usually select several "sampling areas." If developing a transect-based form-based code, the team will generally review the range of transect levels previously documented, and then select four or five sampling areas (often a block-long street) for each that seem to represent typical conditions that are desired by the community.

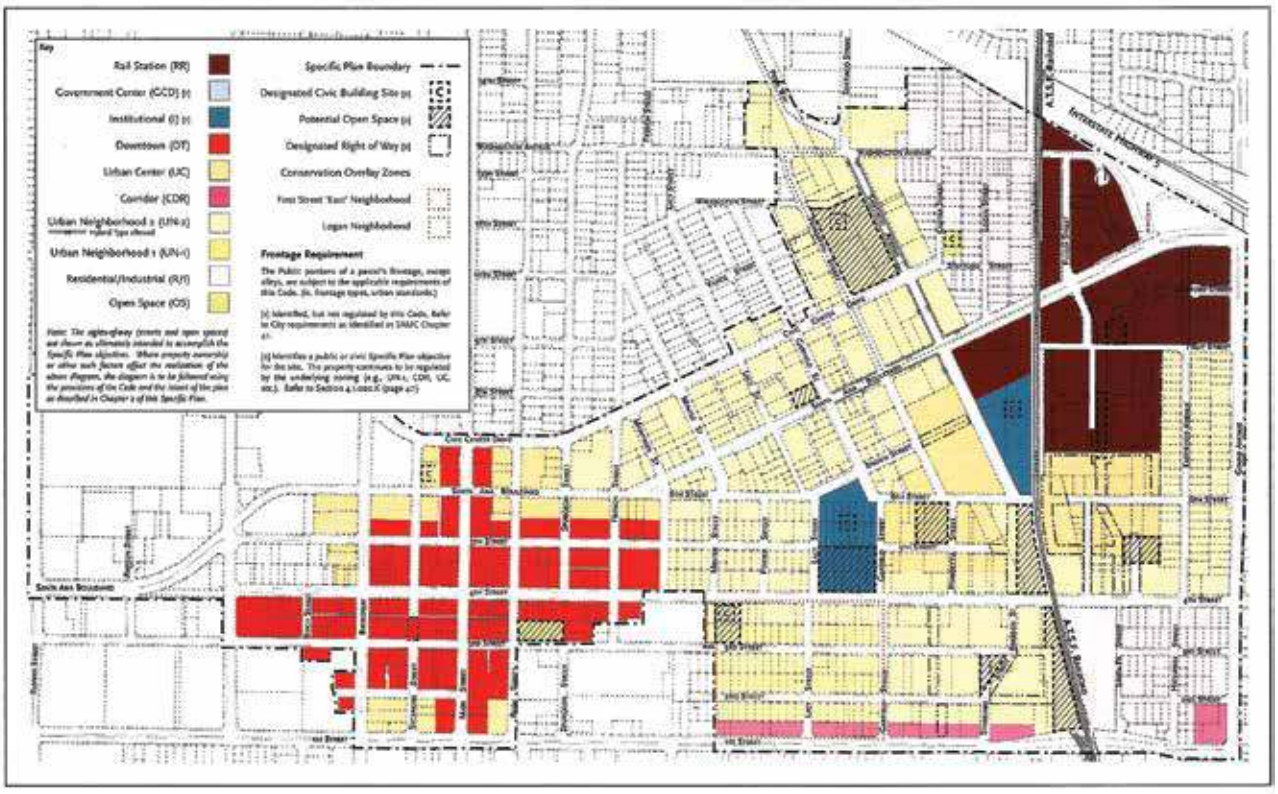
However, if the code team has chosen an approach other than a transect-based code, the sampling method will be slightly different. For example, if the form-based code is to be organized by building types, the code team will usually identify existing buildings in the community that exemplify the physical characteristics of each building type, and then select which ones should be documented (or "sampled"). It is also important to document the area(s) where new building types are to be applied in order to understand the impacts of applying new development standards to those areas.

Site Visit
To document buildings for a transect-based form-based code, the code team will usually visit the areas they have chosen to sample, filling in details about the physical characteristics of each building and lot. Typically, this will include gathering measurements and other information about the form and dimensions of the building, its placement on the lot, the front of the building and its physical relationship to the street, number of parking spaces, and its associated land uses. The team may also take a variety of photos of the block, including building elevations and architectural features, views along the sidewalk, side street conditions, any alleys, and other views showing the relationship between buildings, landscaping, and the public realm.

Organizing the Data
Once the documentation of smaller scale details in the community is complete, the code team will generally begin determining which values among those collected from the sampling areas are most representative of typical conditions. For example, in transect-based form-based codes, the values that best exemplify typical conditions of each sampling area are then used to determine the most representative values for each transect. As mentioned previously, these values will become the base measurements used in developing the actual regulations of the form-based code.

"Ground-Truthing" the Findings
This would be a good time for the code team to hold a meeting with community stakeholders, presenting what the team found and documented during the first round of site visits. Any maps, diagrams, or photo galleries created by the team would be shared with stakeholders, who should be asked whether any important areas were missed or documented incorrectly. Stakeholders should also be asked which areas are successful, which need improvement, and which are good models to replicate elsewhere.





Illustrative plan (top) and regulating plan (bottom), Transit Zoning Code (2010), City of Santa Ana, California.
Credit: Moule & Polyzoides, Architects and Urbanists.

Step Three
Visioning and Creating Regulations

A form-based code is intended to ensure a predictable outcome for the built environment. This requires the desired outcome—the "vision"—to be defined, in detail, by the community. Ideally, a community has already defined its desired outcome in part or in whole—for example, through the recent update of its comprehensive plan. If not, the code team works together with the community to create a detailed vision for its future.

Once this community vision is in place, the code team proceeds to create the specific regulations and procedures of the form-based code.

Public workshop, Village of Campton Hills, Illinois. Credit: Teska Associates, Inc.

Engaging the Community

The specific methods to reach a common community vision will vary, but the essential ingredient is active participation and discussion using a variety of methods, such as community workshops, design charrettes, and focus interviews with key stakeholders.

With the community actively engaged, a vision for the defined area is created. At this point in the process, some consulting firms will create a detailed drawing, sometimes called an "illustrative plan," that shows the envisioned layout of the community. It includes the locations of neighborhoods, districts, and corridors, as well as thoroughfares, civic spaces, buildings, and transit lines. While this drawing is not a necessary step, it may be helpful to communicate significant proposed changes in a community.

Kickoff Meeting

Often at this point in the process, the code team will hold a kickoff meeting with the community (although this may occur earlier in the process).

The meeting should provide residents with a brief, lucid explanation of form-based codes, the overall process, and their role in the creation of the form-based code. If the kickoff meeting occurs at this point in the process, it's likely that the team would present its findings from the documentation of existing conditions to the community. Maps, diagrams, or photo galleries that are easy for a layperson to understand should be exhibited to help explain the team's findings, as well as give the community something visual to respond to. Photo galleries that document the different areas and aspects of the community can be especially effective in helping residents understand new concepts relevant to the development of the form-based code, such as different transect levels or building types (and can help to give the code team credibility in understanding the community).

In response to the presentation, meeting participants typically will be asked which aspects of the community should remain, what should change, what should be a model for future development, and what they want overall. Four suggested categories for change are:

"Preserve"
The community wants to retain the existing physical character of one or more areas with distinct identities (i.e. neighborhoods, transit station areas, or downtowns) and to ensure that infill and redevelopment "fits in" with the existing context.

"Preserve and enhance"
The community wants to retain the existing physical character in one or more areas, but is interested in careful, targeted enhancements to them. This could include changes in the form of future private development or within the public realm (such as streets).

"Evolve"

The community wants to see desired physical change within the planning area over time, but is willing to allow change to occur more gradually, often according to the preferences of individual property owners within the planning area.

"Transform"

The community wants to see desired physical change occur within the shortest possible time. This often entails the combination of form-based codes that are more ambitious and rigorously enforced with other strategies, such as development incentives, housing density bonuses, accelerated processing of development applications, and street and streetscape improvements undertaken by the municipality.

The Importance of the Kick-Off Meeting

The kickoff meeting sets the tone for the creation of the community vision that will guide the form-based code. It's a collaborative effort that requires the input of a variety of stakeholders in the community (including the general public), along with key professionals necessary to complement the knowledge base and skill set within the community. A form-based code is a legal document that inherently affects and will need to be approved by the community, and an effective kickoff meeting is vital to its success.

After the Meeting

Following this meeting, the code team will usually take this feedback and information from the community, along with the products of their existing conditions analysis, and reevaluate larger elements (such as neighborhoods, districts, and corridors). If preparing a transect-based form-based code, the team will probably assign an intended transect level for each neighborhood, both existing and new, from the list of transect levels. In addition, the code team may designate the degree of change desired for existing neighborhoods (such as "preserve," "preserve and enhance," "evolve," and "transform"), based upon input gathered at the community meeting.

If applicable, the code team will also reexamine other elements they have documented and analyzed (such as existing thoroughfares, blocks, civic spaces, and buildings), based on public input.

Explaining and Illustrating the Zoning Districts

The regulations of most form-based codes are assigned by zoning district based upon classifications such as transect level, building type, or street type. At this stage, the code team will usually begin to define and illustrate the main characteristics of each district.

The team will also begin to determine which details and elements belong in each district, such as what types of uses, buildings, frontages, thoroughfares, or civic spaces are allowed. A summary of this information is often paired with a written vision description and illustration of the district on a single page or two, which may be presented to the public as a poster for feedback and eventually serve as the main explanation of the district in the final form-based code document.

BOARDWALK FRONTAGE

The Boardwalk is one of the most memorable places in Virginia Beach. Cyclists, beachgoers, visitors, and residents intermix with cafes and clubs that address out onto the ground floors of the hotels that rise above. Hotels have a maximum base height of 75 feet with towers as high as 200 feet. The Boardwalk is made accessible by regular intersections with Beach Streets.

SHOPPING FRONTAGES

Premier retail addresses within the Oceanfront Resort Area. Shopfronts, outdoor cafe seating, and other commercial uses front wide sidewalks and slower-moving traffic. Residential, office and hotel uses are typically located above the shops and restaurant uses. Streets include 17th, 19th, 31st, and Atlantic Avenue.

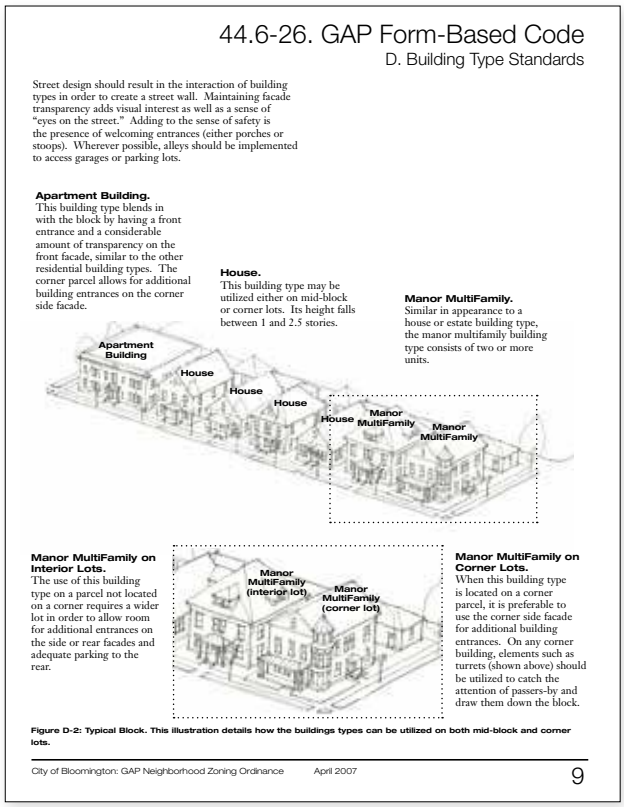
GATEWAY FRONTAGES

Primary routes to, through, and from the Oceanfront Resort Area. While these routes typically carry a higher volume of traffic, they still offer ample accommodations for the pedestrian. Parking and service is also accessed primarily from Gateway streets. Pacific Avenue is an example of a Gateway street.

BEACH FRONTAGES

Ways in which residents and visitors access the Boardwalk. Beach streets have clear visual and physical access to the Boardwalk and are lined with a mix of residential front doors and lobbies alongside outdoor dining and small retail establishments.

Frontage types, Oceanfront Resort District Form-Based Code (2012), City of Virginia Beach, Virginia. Credit: Urban Design Associates.



44.6-26. GAP Form-Based Code
D. Building Type Standards

Street design should result in the interaction of building types in order to create a street wall. Maintaining facade transparency adds visual interest as well as a sense of "eyes on the street." Adding to the sense of safety is the presence of welcoming entrances (either porches or stoops). Wherever possible, alleys should be implemented to access garages or parking lots.

Apartment Building. This building type blends in with the block by having a front entrance and a considerable amount of transparency on the front facade, similar to the other residential building types. The corner parcel allows for additional building entrances on the corner side facade.

House. This building type may be utilized either on mid-block or corner lots. Its height falls between 1 and 2.5 stories.

Manor MultiFamily. Similar in appearance to a house or estate building type, the manor multifamily building type consists of two or more units.

Manor MultiFamily on Interior Lots. The use of this building type on a parcel not located on a corner requires a wider lot in order to allow room for additional entrances on the side or rear facades and adequate parking to the rear.

Manor MultiFamily on Corner Lots. When this building type is located on a corner parcel, it is preferable to use the corner side facade for additional building entrances. On any corner building, elements such as turrets (shown above) should be utilized to catch the attention of passers-by and draw them down the block.

Figure D-2: Typical Block. This illustration details how the buildings types can be utilized on both mid-block and corner lots.

City of Bloomington: GAP Neighborhood Zoning Ordinance April 2007 9

Building Type Standards, Gridley, Allin, & Prickett Neighborhood Form-Based Code (2007), City of Bloomington, Illinois. Credit: Farr Associates.

Specific to Building Types **1703-3.30**

Table 1703-3.30.A: Building Types General

Building Type	Transect Zones
Carriage House. This Building Type is an accessory structure typically located at the rear of a lot. It typically provides either a small residential unit, home office space, or other small commercial or service use that may be above a garage or at ground level. This Type is important for providing affordable housing opportunities and incubating small businesses within walkable neighborhoods.	T3E T3N T4N.1 T4N.2 T5MS T5N.1 T5N.2 T5F T6C
Detached House: Medium. This Building Type is a medium-sized detached structure on a medium-sized lot that incorporates one unit. It is typically located within a primarily single-family residential neighborhood in a walkable urban setting, potentially near a neighborhood main street.	T3E T3N T4N.1 T4N.2 T5MS T5N.1 T5N.2 T5F T6C
Detached House: Compact. This Building Type is a small detached structure on a small lot that incorporates one unit. It is typically located within a primarily single-family residential neighborhood in a walkable urban setting, potentially near a neighborhood main street. This Type enables appropriately-scaled, well-designed higher densities and is important for providing a broad choice of housing types and promoting walkability.	T3E T3N T4N.1 T4N.2 T5MS T5N.1 T5N.2 T5F T6C
Cottage Court. This Building Type consists of a series of small, detached structures, providing multiple units arranged to define a shared court that is typically perpendicular to the street. The shared court takes the place of a private rear yard and becomes an important community-enhancing element of this Type. This Type is appropriately-scaled to fit within primarily single-family or medium-density neighborhoods. It enables appropriately-scaled, well-designed higher densities and is important for providing a broad choice of housing types and promoting walkability.	T3E T3N T4N.1 T4N.2 T5MS T5N.1 T5N.2 T5F T6C
Duplex. This Building Type is a small- to medium-sized structure that consists of two side-by-side or stacked dwelling units, both facing the street and within a single building massing. This Type has the appearance of a medium to large single-family home and is appropriately scaled to fit within primarily single-family neighborhoods or medium-density neighborhoods. It enables appropriately-scaled, well-designed higher densities and is important for providing a broad choice of housing types and promoting walkability.	T3E T3N T4N.1 T4N.2 T5MS T5N.1 T5N.2 T5F T6C

Key T# Allowed T# Not Allowed

City of Cincinnati Form-Based Code **Public Review Draft: 9/21/12** **1703-3-3**

Building Types, Cincinnati Form-Based Code (Public Review Draft, 2012), City of Cincinnati, Ohio. Credit: Opticos Design, Inc.

The code team will also usually begin to create lists of other elements that will be regulated (such as the types of thoroughfares, civic spaces, building types, and frontages). The team will typically create a summary of each that includes descriptive text, illustrations, and diagrams as needed. For example, if thoroughfares will be regulated by the form-based code, the team will prepare a summary of each type of thoroughfare that is needed, usually including a section drawing of the intended thoroughfare design that indicates the basic standard dimensions that will be required.

Finally, the code team may assess whether there are any other optional elements the community wants to regulate, such as architectural style. If so, the team would usually determine the types (or styles) to be included in the vision and the code for these elements, and then create appropriate descriptive text and imagery for each.

Use Types

In conventional zoning, zoning districts are primarily defined by land use. Form-based codes emphasize the physical character of development (its form) and include the regulation of land uses.

Similar to conventional zoning, permitted and conditional or special uses are listed by district in most form-based codes. However, land uses may be regulated more broadly, with land use categories in lieu of long lists of specific permitted uses. Of course, form-based codes can also specify sub-types that are not allowed in certain locations or would be subject to discretionary review, such as businesses involving the sale of alcohol. Last, it is common for form-based codes to include requirements for the location of various uses within individual buildings (such as permitting office or residential uses on upper stories only).

Building Types

Some common building types used in form-based codes include "detached single-unit house," "townhouse," "duplex," "courtyard apartment," and "mixed-use building." Building types typically include bulk regulations (such as minimum lot width, maximum building height, building setbacks, etc.) that are usually defined by zoning district in a conventional zoning code, as well as some design and architectural parameters (such as roof type, location of parking, minimum transparency requirements, building materials, etc.).

Regulating which building types are allowed is not required in a form-based code, but it can help a community ensure a diverse stock of buildings, which is key to the creation (or preservation) of vibrant urban places. It is one of the means by which a community can avoid the damaging effects of some conventional zoning regulations, such as floor area ratio, which can encourage developers to focus on achieving maximum volume allowed for a lot. In addition, requiring a diverse mix of building types might be necessary to mitigate decades of standards that promote single-use development and discourage alternative building types.

5.2.2 Permitted Use Table

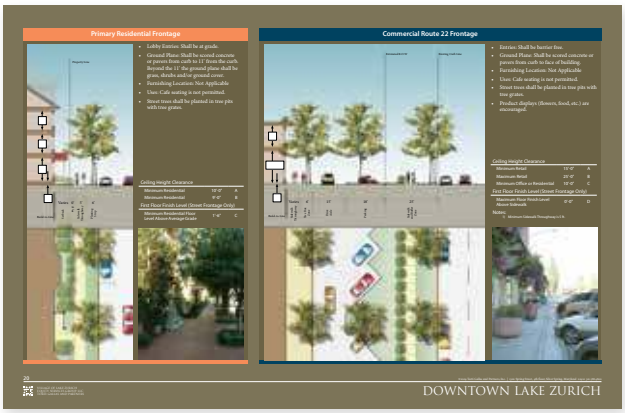
KEY: Blank cell = Not Permitted ■ = Permitted □ = Subject to Special Use Review

USE CATEGORY	SPECIFIC USE	R1	R2	R3	R4	R6	R7	R8	CN	CG	B1	N1	P1	I1	I2	I3	Use Standard
RESIDENTIAL																	
Household Living (see 5.6.2.A)	Single-Family	■	■	■	■	■	■	■									
	Two-Family (Duplex)	■	■	■	■	■	■	■									5.3.1A
	Townhouse					■	■	■	■	■							
	Apartment					■	■	■	■	■							
	Upper Story Residential								■	■	■	■					
	Live-Work								■	■	■	■					5.3.1B
Group Living (see 5.6.2.B)	Boarding House, Rooming House						□	□	□	□	■						
	Children's Home					□	□	□									
	Congregate Housing	□	□	□	□	□	□	□	□	□	□						
	Elderly Housing, Assisted Living Facility	□	□	□	□	□	□	□	□	□	□						
	Fraternity, Sorority, Student Dormitory											□					
	Family Care Facility	□■	□■	□■	□■	□■	□■	□■									5.3.1C
	Group Care Facility	□	□	□	□	□	□■	□■									5.3.1C
	Monastery, Convent	□	□	□	□	□	□	□	□	□	□						
	Nursing Home, Full-time Convalescent, Hospice, Life Care Center					□	□	□	□	□	□						
CIVIC																	
Community Service (see 5.6.3.A)	Museum, Library	□	□	□	□	□	□	□	■	■	■	■					
	Neighborhood Arts Center or Similar Community Facility (public)	□	□	□	□	□	□	□	■	■	■						
	Philanthropic Institution									■	■						
	Police, Fire, EMS Substation	□	□	□	□	□	□	□	■	■	■	■		■	■	■	
Day Care (see 5.6.3.B)	All day care, except as listed below:	□	□	□	□	□	□	□	■	■	■	■					
	Child Care Home (up to 8 children)	■	■	■	■	■	■	■									5.3.2A
	Day Care Center (8+ children)	□	□	□	□	□	□	□	■	■	■	■					5.3.2B
	Drop-in Child Care Center								■	■	■						
Educational Facility (see 5.6.3.C)	All educational facilities, except as listed below:	□	□	□	□	□	□	□	□	□	□						
	Academy (special training)								■	■	■	■					
	College, Community College, University											■					
	Job Training, Vocational Rehabilitation Service									■	■	■		■			
	School, Vocational, Business									■	■	■		■			
	School, Trade, no heavy equipment or truck operators									■	■	■		■			
Medical Facility (see 5.6.3.D)	All medical facilities, except as listed below:								□	■	■	■					
	Hospital, Medical Center											■					
	Medical or Dental Laboratory								■	■	■	■		■			
	Medical or Dental Clinic, Rehabilitative Clinic								■	■	■	■					
	Medical, Dental Office or Chiropractor								■	■	■	■					
Parks and Open Area (see 5.6.3.E)	All parks and open areas, except as listed below:	■	■	■	■	■	■	■	■	■	■	■		■	■	■	
	Cemetery, Mausoleum, Columbarium, Memorial Park	□	□	□	□	□	□	□	□	□	□	□					
	Game Preserve, Wildlife Management Area, Refuge, Animal																
Passenger Terminal (see 5.6.3.F)	Airport, Heliport																
	Bus, Train Passenger Terminal										□				■	■	
	Taxicab Dispatch Station, Limousine Service, Charter Service									□	□				■	■	
Place of Worship (see 5.6.3.G)	All places of worship	□	□	□	□	□	□	□	■	■	■	■					
Social Service Institution (see 5.6.3.H)	Alchohol Abuse Treatment, Drug Rehabilitation					□	□	□		□	■						
	Halfway House					□	□	□	□	□	□						5.3.1C
	Psychiatric Institution, Sanatorium										■	■					
	Single Room Occupancy						□	□	□	□	■						
	Social Service Facility, Soup kitchen, Transient Lodging or Shelter for the Homeless										□						
Utilities (see 5.6.3.I)	All minor utilities	□	□	□	□	□	□	□	■	■	■	□		■	■	■	5.3.2C
	All major utilities													□	□	□	
	Wireless Communication Facility	see 5.3.2D															
COMMERCIAL																	
Indoor Recreation (see 5.6.4.A)	All indoor recreation, except as listed below:								■	■	■						
	Auditorium, arena, stadium (indoor)									□	□						
	Convention Center										■						
	Indoor Shooting Range									□	□					□	
Office (see 5.6.4.B)	All offices								■	■	■			■			
Outdoor Recreation (see 5.6.4.C)	All outdoor recreation, except as listed below:									□	□				□	□	
	Outdoor Shooting Range														□	□	
	Stadium or Arena, Commercial Amphitheater										□						
Overnight Lodging (see 5.6.4.D)	Bed and Breakfast	□	□	□	□	□	□	□	■	■	■						5.3.3B
	Hotel, Motel, Inn, Extended Stay Facility								□	■	■	□					
	Youth Hostel									□	■						
Parking, Commercial (see 5.6.4.E)	All commercial parking									□	■	■	■	■	■		
Restaurant (see 5.6.4.F)	All restaurants, except as listed below:								■	■	■						
	Restaurant, Drive-in									■							

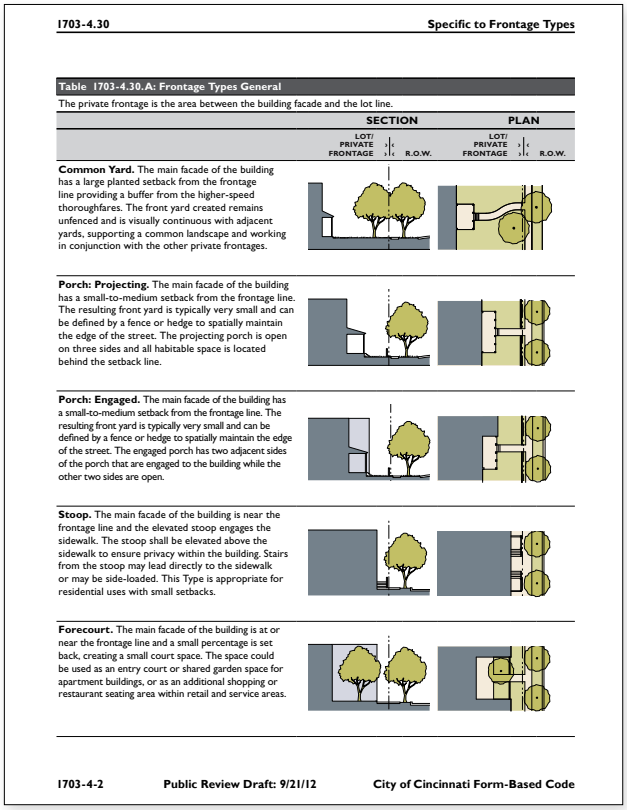
Permitted Use Table, Heart of Peoria Land Development Code (2007), Peoria, Illinois. Credit: Ferrell Madden/Code Studio.

Frontage Types

Frontage refers to the way that the building engages the public realm—typically the building's front side. Similar to standards regulating minimum and maximum building height, form-based codes often specify which types of frontages are allowed in each zone. The SmartCode, a form-based code template, includes eight standard frontage types: "common yard," "porch and fence," "terrace or light court," "forecourt" (where a portion of the façade is close to the frontage line and the central portion is set back), "stoop," "shop front and awning," "gallery," and "arcade."



Frontage standards, Form-Based Code Regulations (2008), Village of Lake Zurich, Illinois. Credit: Torti Gallas and Partners.



1703-4.30 Specific to Frontage Types

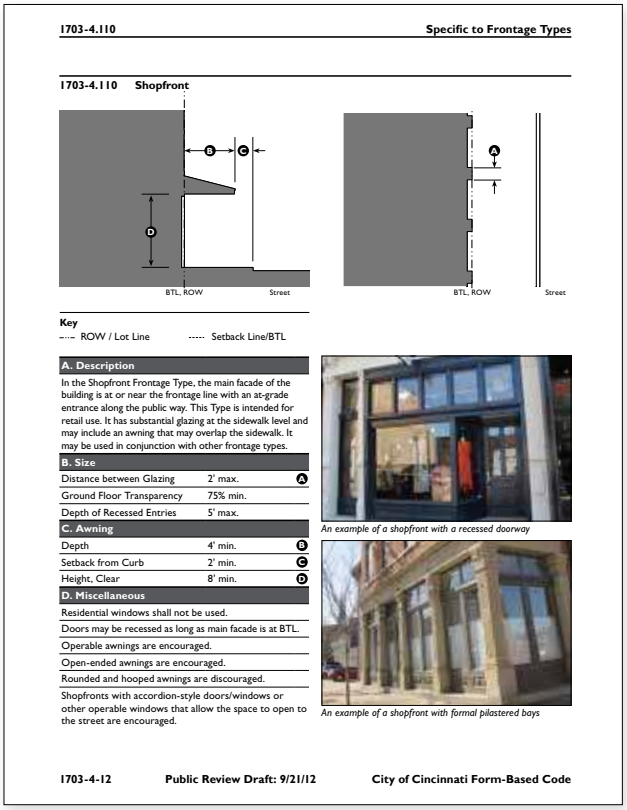
Table 1703-4.30.A: Frontage Types General

The private frontage is the area between the building facade and the lot line.

	SECTION	PLAN
	LOT/ PRIVATE FRONTAGE / R.O.W.	LOT/ PRIVATE FRONTAGE / R.O.W.
Common Yard. The main facade of the building has a large planted setback from the frontage line providing a buffer from the higher-speed thoroughfares. The front yard created remains unfenced and is visually continuous with adjacent yards, supporting a common landscape and working in conjunction with the other private frontages.		
Porch: Projecting. The main facade of the building has a small-to-medium setback from the frontage line. The resulting front yard is typically very small and can be defined by a fence or hedge to spatially maintain the edge of the street. The projecting porch is open on three sides and all habitable space is located behind the setback line.		
Porch: Engaged. The main facade of the building has a small-to-medium setback from the frontage line. The resulting front yard is typically very small and can be defined by a fence or hedge to spatially maintain the edge of the street. The engaged porch has two adjacent sides of the porch that are engaged to the building while the other two sides are open.		
Stoop. The main facade of the building is near the frontage line and the elevated stoop engages the sidewalk. The stoop shall be elevated above the sidewalk to ensure privacy within the building. Stairs from the stoop may lead directly to the sidewalk or may be side-loaded. This Type is appropriate for residential uses with small setbacks.		
Forecourt. The main facade of the building is at or near the frontage line and a small percentage is set back, creating a small court space. The space could be used as an entry court or shared garden space for apartment buildings, or as an additional shopping or restaurant seating area within retail and service areas.		

1703-4-2 Public Review Draft: 9/21/12 City of Cincinnati Form-Based Code

Frontage Types, Cincinnati Form-Based Code (Public Review Draft, 2012), City of Cincinnati, Ohio. Credit: Opticos Design, Inc.



1703-4.110 Specific to Frontage Types

1703-4.110 Shopfront

Key

---- ROW / Lot Line ----- Setback Line/BTL

A. Description

In the Shopfront Frontage Type, the main facade of the building is at or near the frontage line with an at-grade entrance along the public way. This Type is intended for retail use. It has substantial glazing at the sidewalk level and may include an awning that may overlap the sidewalk. It may be used in conjunction with other frontage types.

B. Size		
Distance between Glazing	2' max.	A
Ground Floor Transparency	75% min.	
Depth of Recessed Entries	5' max.	
C. Awning		
Depth	4' min.	B
Setback from Curb	2' min.	C
Height, Clear	8' min.	D

D. Miscellaneous

Residential windows shall not be used.

Doors may be recessed as long as main facade is at BTL.

Operable awnings are encouraged.

Open-ended awnings are encouraged.

Rounded and hooped awnings are discouraged.

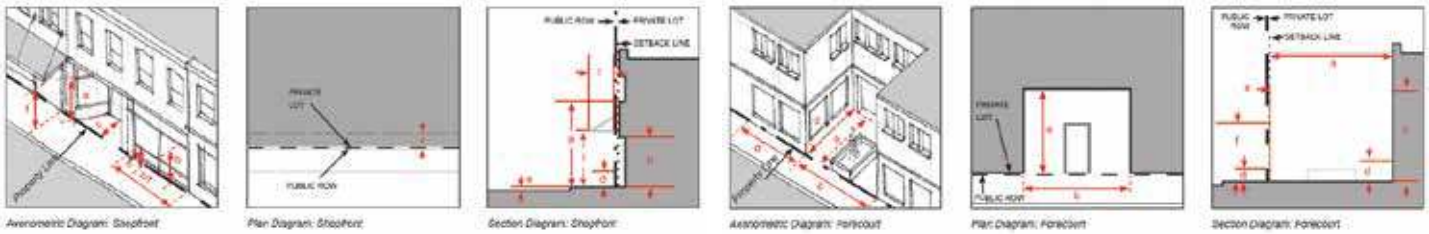
Shopfronts with accordion-style doors/windows or other operable windows that allow the space to open to the street are encouraged.

An example of a shopfront with a recessed doorway

An example of a shopfront with formal pilastered bays

1703-4-12 Public Review Draft: 9/21/12 City of Cincinnati Form-Based Code

Frontage Types, Cincinnati Form-Based Code (Public Review Draft, 2012), City of Cincinnati, Ohio. Credit: Opticos Design, Inc.



Frontage Types, Downtown Specific Plan (2007), City of Ventura, California. Credit: Moule & Polyzoides, Architects and Urbanists.


TRANSIT ZONING CODE: Table 7A: Concepts for Specific Streets

Minter Street

Existing condition

MOVEMENT ..... free
MEDIAN ..... none
TRAFFIC LANES ..... 2; 1 each way
BULBOUTS ..... mid-block - 250' spacing
PARKING ..... both sides

Minter Street would be experienced as a moderately slow paced, free moving residential street characterized by canopy trees in continuous planters, visually separating the vehicular traffic from the pedestrian traffic on sidewalks. Streetlights poles would be at pedestrian scale and in a style complimentary to the overall streetscape. Parking would be provided on both sides of the street. Bulbouts may be installed midblock as needed.

Plan / Section Diagram

Garfield Street

Existing condition

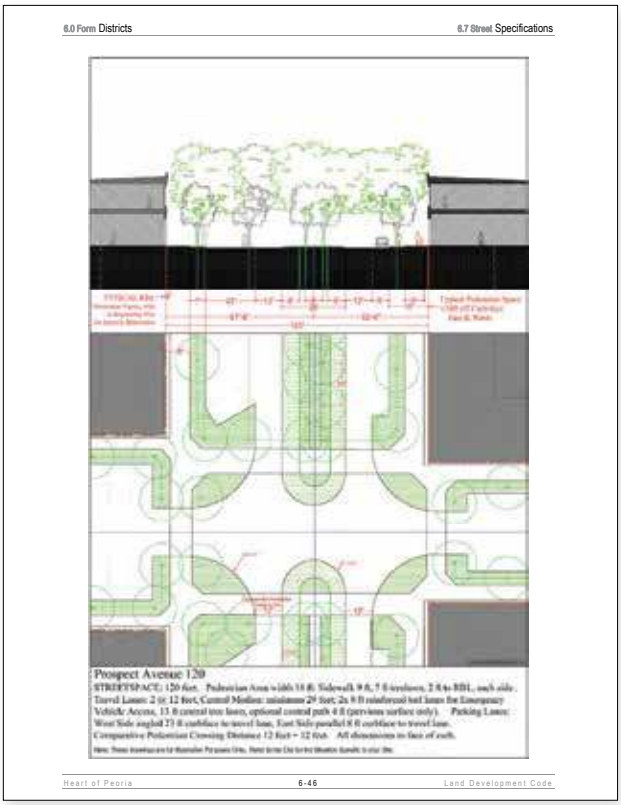
MOVEMENT ..... slow
MEDIAN ..... none
TRAFFIC LANES ..... 2; 1 each way
BULBOUTS ..... mid-block - 250' spacing
PARKING ..... both sides

Garfield Street would be experienced as a slow paced, slow moving residential street characterized by canopy trees in continuous planters, visually separating the vehicular traffic from the pedestrian traffic on sidewalks. Streetlights poles would be at pedestrian scale and in a style complimentary to the overall streetscape. Parking would be provided on both sides of the street. Bulbouts may be installed midblock as needed.

Plan / Section Diagram

6/13 TRANSIT ZONING CODE
SPECIFIC DEVELOPMENT 84
City of Santa Ana, California

Concepts for Specific Streets, Transit Zoning Code (2010), City of Santa Ana, California. Credit: Moule & Polyzoides, Architects and Urbanists.


6.0 Form Districts 6.7 Street Specifications

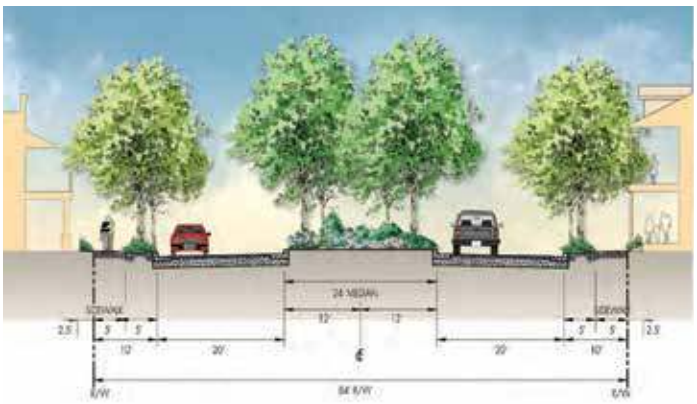
Prospect Avenue 120

Heart of Peoria 6-46 Land Development Code

Street Specifications - Prospect Avenue, Heart of Peoria Land Development Code (2007), Peoria, Illinois. Credit: Ferrell Madden/Code Studio.

Thoroughfare Types

Thoroughfare types may include alleys, lanes, roads, streets, commercial/main streets, avenues, and boulevards. Each thoroughfare type could be assigned regulations such as the number and width of lanes designated for both vehicular and bicycle travel, the width of space allotted for pedestrians, the number and width of areas designated for on-street parking, and the type and spacing of trees and street lights.



Thoroughfare standards for "Neighborhood Center Boulevard," Loma Rica Ranch Specific Plan (2011), City of Grass Valley, California. Credit: Opticos Design, Inc.

Thoroughfares

Thoroughfares can serve many roles in a community, and are integral to their success. They are a means of travel to destinations, near and far, and as the primary public space in most communities, frequently they are the destination for shopping and other activities.

In communities that have not reached their potential, walkability is frequently a missing element. In *Street Design Guidelines for Healthy Neighborhoods* (Center for Livable Communities, 1999), Dan Burden, an expert in the creation of livable communities, has stated that "Walkable streets form the backbone of friendly, interactive, safe, secure neighborhoods." Focused on the safe and efficient flow of automobile traffic, most conventional thoroughfare standards are simply not up to the task of creating walkable communities.

Form-based codes can offer an opportunity to define thoroughfare standards that are carefully coordinated with other requirements, comprehensively addressing the needs of travel along with the broader needs of the public realm and the community as a whole. It should be noted, however, that if a community is mostly built out, thoroughfare standards are likely the responsibility of the public works department as they conduct ongoing maintenance and improvement of existing roadways, often working with minimal or insufficient budgets (making the implementation of new thoroughfare standards more challenging).

8.01.070 Urban Parks — Civic Spaces

8.01.070 Urban Parks

Description

Urban parks include larger open spaces available for civic purposes, commercial activity, and unstructured recreation, as well as smaller structured recreation facilities and other passive uses. These parks should have a more formal urban character and be defined by the surrounding building frontages and adjacent tree-lined streets. All buildings adjacent to the square must have a front onto the park. The landscape should consist of lawns, trees, and shrubs planted in formal patterns and furnished with paths and benches. Shaded areas for seating should be provided. A civic element or small structure such as a kiosk, open shelter, pergola, or fountain may be included at a prominent location.

Urban parks may be centrally located at the geographic heart of neighborhoods and/or at the intersection of important thoroughfares. They may also be located at the edges of neighborhoods in locations where several residential areas may benefit from recreational amenities, and serve as a transition between developed areas and natural open spaces.

Size & Location	
Min. Width	100'
Max. Width	N/A
Acreage	0.5 – 4.9 acres
Transect Zones	T4MS, T4MS-O

Character
Formally Disposed
Passive/Active (Unstructured) Open Space
Building Frontage along at least one side
All buildings must front this space
Must front at least two streets
Paths, lawns, and trees formally arranged
Walkways and plantings at all edges
Civic element at prominent location
Allowed/Typical Uses
Passive /Active (Unstructured) Open Space
Civic Uses, including Outdoor Pavilions, Open-Air Shelters, Outdoor Assembly, Outdoor Seating, Public Restrooms
Commercial Uses, including Farmers' Markets subject to Special Event Permit
Playgrounds
Limited Community Facilities, Meeting Rooms, Community Centers
Small Structured Recreational Facilities
Stormwater Management Techniques
Integrated Runoff
Bioretention Best Management Practices
Extended Detention Basins
Porous Pavers and Landscaping

8-8 Livermore Development Code

Civic Spaces - Urban Parks, Development Code (2010), City of Livermore, California. Credit: Opticos Design, Inc.

Civic Spaces 8.01.100 Playgrounds

8.01.100 Playgrounds

Description

Playgrounds are open spaces designed and equipped for the recreation of children. They shall be interspersed within residential areas so that every neighborhood or freestanding development area has at least one playground. Playgrounds may be freestanding or located within larger Plazas, Neighborhood Parks, Pocket Parks, or Civic Spaces.

Playgrounds should be quiet, safe places protected from the street, and should typically be placed so that children do not have to cross major, roads to get to them. Often playgrounds and tot-lots are interspersed within residential areas. An open shelter, play structures or interactive art and fountains may be included with landscaping between. Shaded areas and seating must be provided. Playgrounds may be included within larger parks and public spaces.

Size & Location	
Min. Width	n/a
Max. Width	n/a
Acreage	n/a
Transect Zones	All Transect Zones

Character
Focused Towards Children
Fenced with Minimal Exits
Independent of Building Frontage
Protected from Traffic
Allowed/Typical Uses
Passive /Active (Unstructured) Open Space
Low-Impact Civic Uses, including Picnic Facilities, Outdoor Seating
Play Structures, Interactive Art, Fountains
Stormwater Management Techniques
Bioretention Best Management Practices
Porous Pavers and Landscaping

Livermore Development Code 8-11

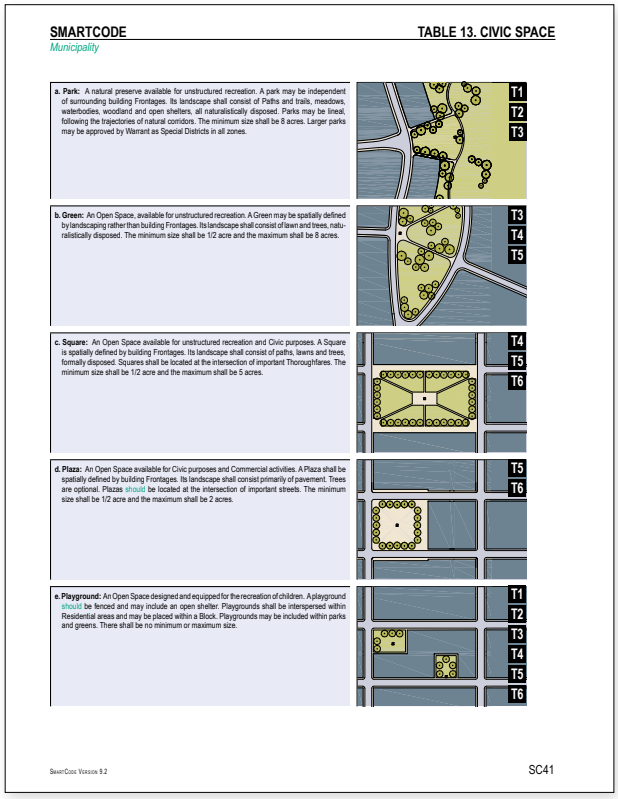
Civic Spaces - Playgrounds, Development Code (2010), City of Livermore, California. Credit: Opticos Design, Inc.

Civic Space Types

Civic space types are essentially open space or other public areas that may include parks, greens, squares, plazas, pocket parks, playgrounds, and playing fields. For civic space types, typical regulations include the minimum and maximum acreage of land required, requirements for the placement of civic spaces, the appropriate zones for each civic space type, the kind of recreation the civic space is intended to facilitate, and the overall intended look and feel of the space.

Civic Spaces

When wisely designed and located, abundant parks and other civic spaces make a community a more desirable place to live and work, improving the health of residents and the value of their homes. In addition, they can serve as a cherished place for residents, workers, and visitors to gather—within a block, neighborhood, or entire community—helping to define the identity of the area. As part of a comprehensive form-based code, wisely-developed standards can help communities make the most of rare opportunities to create new civic spaces.



SMARTCODE — TABLE 13. CIVIC SPACE

Municipality

a. Park: A natural preserve available for unstructured recreation. A park may be independent of surrounding building Frontages. Its landscape shall consist of Paths and trails, meadows, waterbodies, woodland and open shelters, all naturalistically disposed. Parks may be lineal, following the trajectories of natural corridors. The minimum size shall be 8 acres. Larger parks may be approved by Warrant as Special Districts in all zones.

T1 T2 T3

b. Green: An Open Space, available for unstructured recreation. A Green may be spatially defined by landscaping rather than building Frontages. Its landscape shall consist of lawn and trees, naturalistically disposed. The minimum size shall be 1/2 acre and the maximum shall be 8 acres.

T3 T4 T5

c. Square: An Open Space available for unstructured recreation and Civic purposes. A Square is spatially defined by building Frontages. Its landscape shall consist of paths, lawns and trees, formally disposed. Squares shall be located at the intersection of important Thoroughfares. The minimum size shall be 1/2 acre and the maximum shall be 5 acres.

T4 T5 T6

d. Plaza: An Open Space available for Civic purposes and Commercial activities. A Plaza shall be spatially defined by building Frontages. Its landscape shall consist primarily of pavement. Trees are optional. Plazas should be located at the intersection of important streets. The minimum size shall be 1/2 acre and the maximum shall be 2 acres.

T5 T6

e. Playground: An Open Space designed and equipped for the recreation of children. A playground should be fenced and may include an open shelter. Playgrounds shall be interspersed within Residential areas and may be placed within a Block. Playgrounds may be included within parks and greens. There shall be no minimum or maximum size.

T1 T2 T3 T4 T5 T6

SmartCode Version 9.2 SC41

Civic Space, SmartCode. Credit: Duany Plater-Zyberk & Company.

Creating the Regulating Plan and Zoning District Regulations

After establishing the general elements within each zoning district, the code team usually next determines the exact values of the form-based code's regulations, which are organized by district. Each district may contain one or more permitted building types. As the code team develops each district's specific regulations, they will typically also begin drafting the "regulating plan," which is akin to a zoning map and assigns the newly created zoning districts to specific physical locations, typically by color-coding the areas or lots where each of the districts apply.

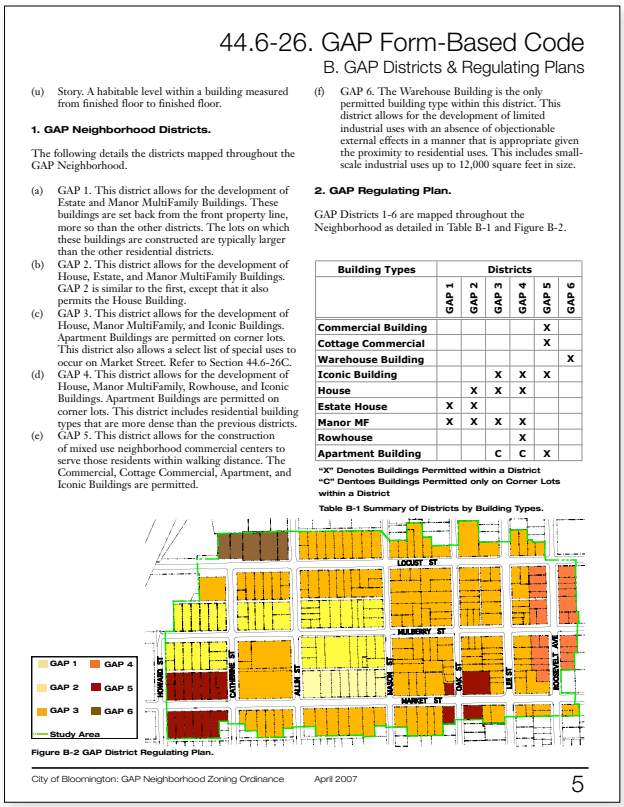
These areas are usually defined within a framework of streets and blocks, often with boundary lines falling at the rear of lots or at alleys, allowing harmonious transitions between different districts. The definition and demarcation of different districts depend upon what type of form-based code is being created—for example, whether it is a transect-based or street-based form-based code.

Meanwhile, the code team will also determine the specific regulations for each zoning district, often drawing from measurements that were determined to best exemplify the typical or representative conditions of zones that were "sampled" during the documentation of existing conditions.

When is the Regulating Plan Created?

The regulating plan is usually created as part of drafting the form-based code. For example, when a form-based code is developed to replace an existing development code, the existing zoning map is replaced with a regulating plan that implements the intentions of the community's vision by assigning specific boundaries for the new districts.

But for some form-based codes, a regulating plan may be created later. Examples of this include regulating plans that need to be created for larger infill or "greenfield" sites that were not planned during the development of the community's form-based code. In this scenario, a more precise regulating plan may be created as part of the application for a proposed development project, using the development standards from the community's form-based code that are relevant to the project.



44.6-26. GAP Form-Based Code

B. GAP Districts & Regulating Plans

(u) Story. A habitable level within a building measured from finished floor to finished floor.

1. GAP Neighborhood Districts.

The following details the districts mapped throughout the GAP Neighborhood.

(a) GAP 1. This district allows for the development of Estate and Manor MultiFamily Buildings. These buildings are set back from the front property line, more so than the other districts. The lots on which these buildings are constructed are typically larger than the other residential districts.

(b) GAP 2. This district allows for the development of House, Estate, and Manor MultiFamily Buildings. GAP 2 is similar to the first, except that it also permits the House Building.

(c) GAP 3. This district allows for the development of House, Manor MultiFamily, and Iconic Buildings. Apartment Buildings are permitted on corner lots. This district also allows a select list of special uses to occur on Market Street. Refer to Section 44.6-26C.

(d) GAP 4. This district allows for the development of House, Manor MultiFamily, Rowhouse, and Iconic Buildings. Apartment Buildings are permitted on corner lots. This district includes residential building types that are more dense than the previous districts.

(e) GAP 5. This district allows for the construction of mixed use neighborhood commercial centers to serve those residents within walking distance. The Commercial, Cottage Commercial, Apartment, and Iconic Buildings are permitted.

(f) GAP 6. The Warehouse Building is the only permitted building type within this district. This district allows for the development of limited industrial uses with an absence of objectionable external effects in a manner that is appropriate given the proximity to residential uses. This includes small-scale industrial uses up to 12,000 square feet in size.

2. GAP Regulating Plan.

GAP Districts 1-6 are mapped throughout the Neighborhood as detailed in Table B-1 and Figure B-2.

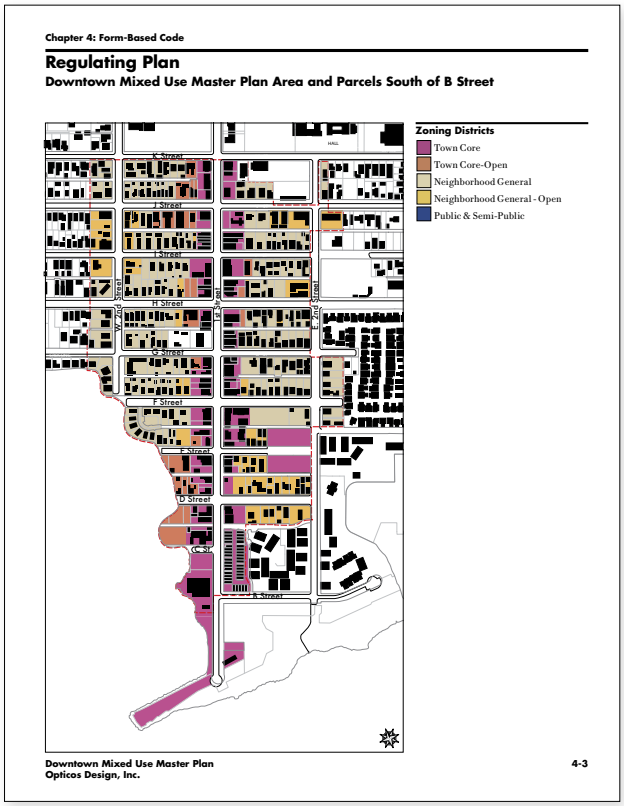
Building Types	Districts					
	GAP 1	GAP 2	GAP 3	GAP 4	GAP 5	GAP 6
Commercial Building					X	
Cottage Commercial					X	
Warehouse Building						X
Iconic Building			X	X	X	
House		X	X	X		
Estate House	X	X				
Manor MF	X	X	X	X		
Rowhouse				X		
Apartment Building			C	C	X	

"X" Denotes Buildings Permitted within a District
"C" Dentoes Buildings Permitted only on Corner Lots within a District

Table B-1 Summary of Districts by Building Types.

Figure B-2 GAP District Regulating Plan.

Regulating plan, Gridley, Allin, & Prickett Neighborhood Form-Based Code (2007), City of Bloomington, Illinois. Credit: Farr Associates.



Chapter 4: Form-Based Code

Regulating Plan

Downtown Mixed Use Master Plan Area and Parcels South of B Street

Regulating plan, Downtown Mixed Use Master Plan (2007), City of Benicia, California. Credit: Opticos Design, Inc.

The following are some of the regulations that are typically determined first by the code team:

Building Form Standards

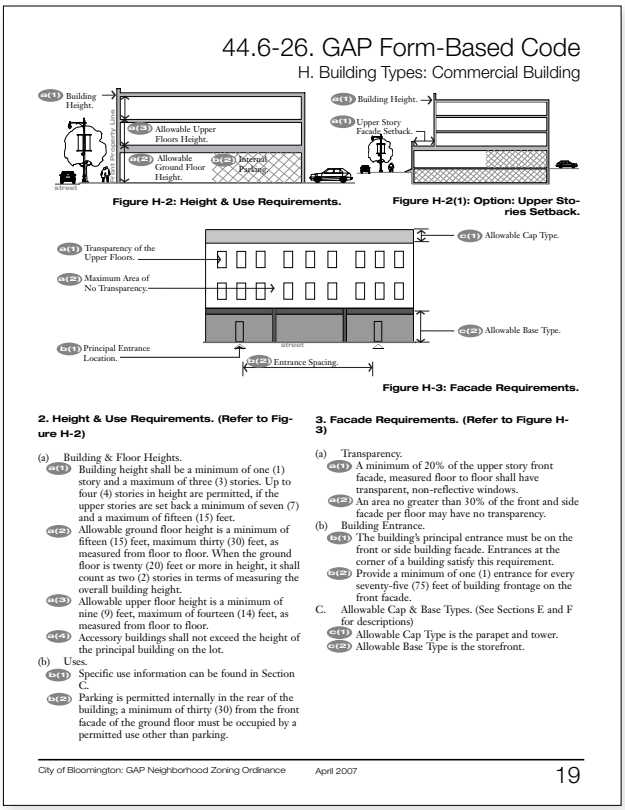
Building form standards typically include a broad set of requirements for the configuration, features, and functions of buildings that define and shape the public realm, such as building placement and form, lot sizes, parking, as well as allowed land uses, encroachments, and frontage and building types.

Building Placement

It would be difficult to overstate the importance of standards regulating the placement of buildings. Together with thoroughfare standards, they provide the foundation for establishing or preserving the character of a district. Some of the typical regulations for building placement standards include the build-to line, minimum setback, and minimum and maximum widths of lots (the latter to create the desired development scale).

Building Form

Regulations for building form also play a key role in establishing the character of a district. As the "walls" of public spaces, building façades are regulated for height to ensure the correct proportion. The maximum and minimum sizes of buildings are sometimes regulated to ensure that they are an appropriate size for the desired vision of the area, establishing a rich urban form through a harmonious range of building sizes. Some of the typical regulations



44.6-26. GAP Form-Based Code
H. Building Types: Commercial Building

Figure H-2: Height & Use Requirements.

Figure H-2(1): Option: Upper Stories Setback.

Figure H-3: Facade Requirements.

2. Height & Use Requirements. (Refer to Figure H-2)

(a) Building & Floor Heights.
a(1) Building height shall be a minimum of one (1) story and a maximum of three (3) stories. Up to four (4) stories in height are permitted, if the upper stories are set back a minimum of seven (7) and a maximum of fifteen (15) feet.
a(2) Allowable ground floor height is a minimum of fifteen (15) feet, maximum thirty (30) feet, as measured from floor to floor. When the ground floor is twenty (20) feet or more in height, it shall count as two (2) stories in terms of measuring the overall building height.
a(3) Allowable upper floor height is a minimum of nine (9) feet, maximum of fourteen (14) feet, as measured from floor to floor.
a(4) Accessory buildings shall not exceed the height of the principal building on the lot.

(b) Uses.
b(1) Specific use information can be found in Section C.
b(2) Parking is permitted internally in the rear of the building; a minimum of thirty (30) from the front facade of the ground floor must be occupied by a permitted use other than parking.

3. Facade Requirements. (Refer to Figure H-3)

(a) Transparency.
a(1) A minimum of 20% of the upper story front facade, measured floor to floor shall have transparent, non-reflective windows.
a(2) An area no greater than 30% of the front and side facade per floor may have no transparency.

(b) Building Entrance.
b(1) The building's principal entrance must be on the front or side building facade. Entrances at the corner of a building satisfy this requirement.
b(2) Provide a minimum of one (1) entrance for every seventy-five (75) feet of building frontage on the front facade.

C. Allowable Cap & Base Types. (See Sections E and F for descriptions)
c(1) Allowable Cap Type is the parapet and tower.
c(2) Allowable Base Type is the storefront.

Building form standards, Gridley, Allin, & Prickett Neighborhood Form-Based Code (2007), City of Bloomington, Illinois. Credit: Farr Associates.

1703-3.140 Specific to Building Types

1703-3.140 Main Street Mixed-Use

Attached Main Street buildings form a unified streetscape along a vibrant commercial street.

Main Street building with bay windows and bright shopfronts

Main Street building with a variety of shopfront sizes.

A. Description

The Main Street Mixed-Use Building Type is a small- to medium-sized structure, typically attached, intended to provide a vertical mix of uses with ground-floor retail, or service uses and upper-floor service, or residential uses. This Type makes up the primary component of a neighborhood main street and portions of a downtown main street, therefore being a key component to providing walkability.

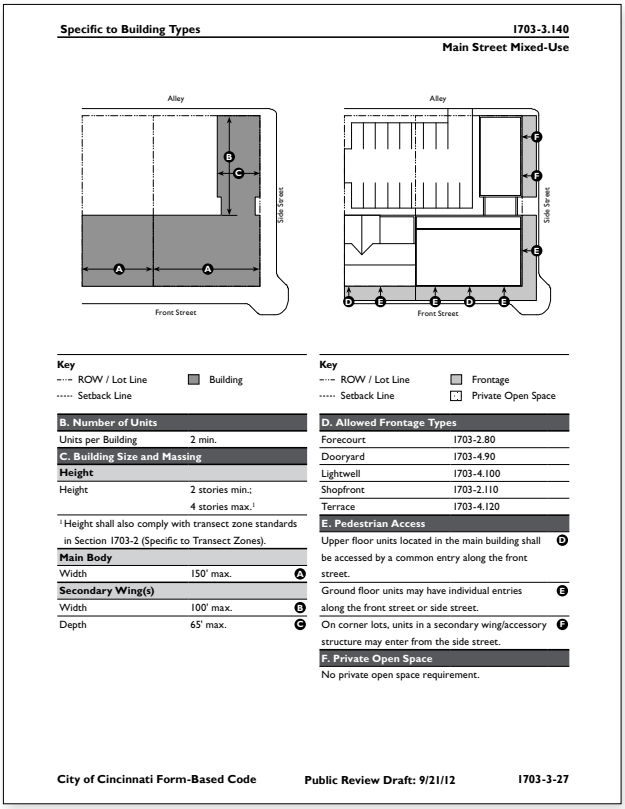
T3E	T3N					
T4N.1	T4N.2					
T5MS	T5N.1	T5N.2	T5F	T6C		

Key: T# Allowed; T# Not Allowed

General Note: Photos on this page are illustrative, not regulatory.

1703-3-26 Public Review Draft: 9/21/12 City of Cincinnati Form-Based Code

Building form standards, Cincinnati Form-Based Code (Public Review Draft, 2012), City of Cincinnati, Ohio. Credit: Opticos Design, Inc.



Specific to Building Types 1703-3.140

Main Street Mixed-Use

Alley

Side Street

Front Street

Key: ROW / Lot Line; Setback Line; Building; Frontage; Private Open Space

B. Number of Units

Units per Building	2 min.

C. Building Size and Massing

Height

Height	2 stories min.; 4 stories max.[1]	

[1] Height shall also comply with transect zone standards in Section 1703-2 (Specific to Transect Zones).

Main Body

Width	150' max.	A

Secondary Wing(s)

Width	100' max.	B
Depth	65' max.	C

D. Allowed Frontage Types

Forecourt	1703-2.80
Dooryard	1703-4.90
Lightwell	1703-4.100
Shopfront	1703-2.110
Terrace	1703-4.120

E. Pedestrian Access

Upper floor units located in the main building shall be accessed by a common entry along the front street. D

Ground floor units may have individual entries along the front street or side street. E

On corner lots, units in a secondary wing/accessory structure may enter from the side street. F

F. Private Open Space

No private open space requirement.

City of Cincinnati Form-Based Code Public Review Draft: 9/21/12 1703-3-27

Building form standards, Cincinnati Form-Based Code (Public Review Draft, 2012), City of Cincinnati, Ohio. Credit: Opticos Design, Inc.

for building form standards include maximum and minimum height, width, and depth of buildings, as well as the maximum and minimum heights of ground-floor and upper floor levels.

Allowed Encroachments

Encroachments involve building elements that may extend over the build-to line (which regulates the distance between the front property line and building facade) or into the setback, such as balconies, and bay windows. By specifying regulations for allowed encroachments in a form-based code, a community can enable a rich urban form.

Parking

The methods for regulating parking in a form-based code are similar to those in a conventional zoning ordinance. Minimum parking standards are typically established according to land uses, but also by zoning district classifications established by the form-based code that are defined by the intensity of development—such as "town center."

Surface parking lots and garages can have a damaging effect on the physical quality of the public realm, creating unattractive gaps between buildings as well as curb cuts that are potential hazards for pedestrians using the sidewalk. In response, form-based codes often seek to minimize these negative impacts by requiring parking to be located at the rear or side of buildings or at the center of blocks, rather than between the building and the street. Similarly, some form-based codes include maximum parking requirements and promote shared and on-street parking for areas of higher-density and mixed-use development that have good access to transit.

In addition to the mandatory number of off-street parking spaces, typical regulations for parking standards include the area on the lot in which parking is allowed, including setbacks, sizes of parking spaces, and travel lanes in parking lots.

Figure 3.18: Shared parking between uses

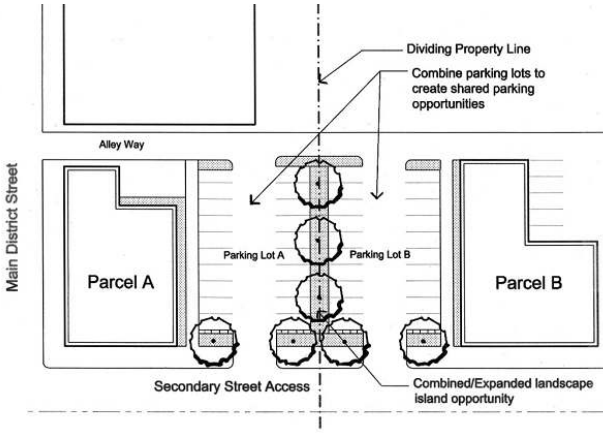
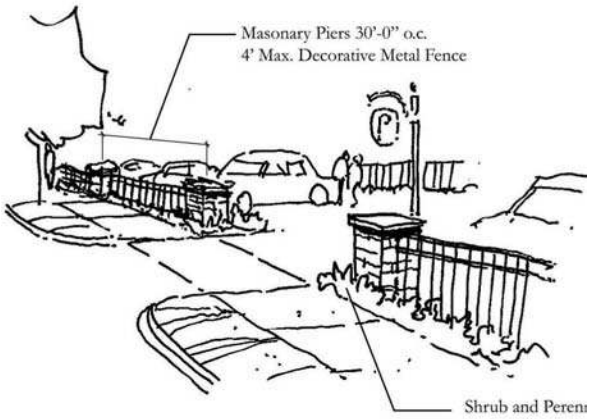


Figure 3.19: Parking lot screening



Parking Placement, Downtown Form-Based Code (2010), Village of Antioch, Illinois. Credit: The Lakota Group.

10.8 PARKING PLACEMENT

10.8.1 FRONT SETBACKS; PARKING LOCATED ADJACENT TO BUILDINGS
Within RR-T and RR-A districts where parking may be located adjacent to the building but not between the building and the front lot line, a minimum front setback of 7 feet is required for any such parking. (See Figure 9) Trees (a minimum of 2.5 inches caliper) and shrubs (a minimum of 24 inches in height) must be planted at the rate of one tree and 10 shrubs for every 40 feet of frontage.

Figure 9: Parking Setback in RR-T and RR-Districts

Parking Placement, Roosevelt Road Form-Based Zoning Districts (2010), Village of Oak Park, City of Berwyn, and Town of Cicero, Illinois. Credit: The Lakota Group.

Parking Strategies to Support Livable Communities

To help communities address their parking concerns with the end goal of making our communities more livable, CMAP created a step-by-step guide to municipal reform of parking policies, entitled *Parking Strategies to Support Livable Communities*. The guide can help municipal governments determine the appropriate steps for addressing their unique challenges and describes more than a dozen strategies to manage parking. It explains how to do a parking survey and effectively engage stakeholders, and also takes a detailed look at the costs of parking structures and available financing mechanisms.

SMARTCODE TABLES 10 & 11. BUILDING FUNCTION & PARKING CALCULATIONS

Municipality

TABLE 10: Building Function. This table categorizes Building Functions within Transect Zones. Parking requirements are correlated to functional intensity. For Specific Function and Use permitted By Right or by Warrant, see Table 12.

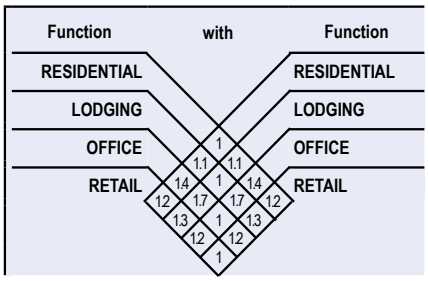
	T2 T3	T4	T5 T6
a. RESIDENTIAL	**Restricted Residential:** The number of dwellings on each Lot is restricted to one within a Principal Building and one within an Accessory Building, with 2.0 parking places for each. Both dwellings shall be under single ownership. The habitable area of the Accessory Unit shall not exceed 440 sf, excluding the parking area.	**Limited Residential:** The number of dwellings on each Lot is limited by the requirement of 1.5 parking places for each dwelling, a ratio which may be reduced according to the shared parking standards (See Table 11).	**Open Residential:** The number of dwellings on each Lot is limited by the requirement of 1.0 parking places for each dwelling, a ratio which may be reduced according to the shared parking standards (See Table 11).
b. LODGING	**Restricted Lodging:** The number of bedrooms available on each Lot for lodging is limited by the requirement of 1.0 assigned parking place for each bedroom, up to five, in addition to the parking requirement for the dwelling. The Lodging must be owner occupied. Food service may be provided in the a.m. The maximum length of stay shall not exceed ten days.	**Limited Lodging:** The number of bedrooms available on each Lot for lodging is limited by the requirement of 1.0 assigned parking places for each bedroom, up to twelve, in addition to the parking requirement for the dwelling. The Lodging must be owner occupied. Food service may be provided in the a.m. The maximum length of stay shall not exceed ten days.	**Open Lodging:** The number of bedrooms available on each Lot for lodging is limited by the requirement of 1.0 assigned parking places for each bedroom. Food service may be provided at all times. The area allocated for food service shall be calculated and provided with parking according to Retail Function.
c. OFFICE	**Restricted Office:** The building area available for office use on each Lot is restricted to the first Story of the Principal or the Accessory Building and by the requirement of 3.0 assigned parking places per 1000 square feet of net office space in addition to the parking requirement for each dwelling.	**Limited Office:** The building area available for office use on each Lot is limited to the first Story of the principal building and/or to the Accessory building, and by the requirement of 3.0 assigned parking places per 1000 square feet of net office space in addition to the parking requirement for each dwelling.	**Open Office:** The building area available for office use on each Lot is limited by the requirement of 2.0 assigned parking places per 1000 square feet of net office space.
d. RETAIL	**Restricted Retail:** The building area available for Retail use is restricted to one Block corner location at the first Story for each 300 dwelling units and by the requirement of 4.0 assigned parking places per 1000 square feet of net Retail space in addition to the parking requirement of each dwelling. The specific use shall be further limited to neighborhood store, or food service seating no more than 20.	**Limited Retail:** The building area available for Retail use is limited to the first Story of buildings at corner locations, not more than one per Block, and by the requirement of 4.0 assigned parking places per 1000 square feet of net Retail space in addition to the parking requirement of each dwelling. The specific use shall be further limited to neighborhood store, or food service seating no more than 40.	**Open Retail:** The building area available for Retail use is limited by the requirement of 3.0 assigned parking places per 1000 square feet of net Retail space. Retail spaces under 1500 square feet are exempt from parking requirements.
e. CIVIC	See Table 12	See Table 12	See Table 12
f. OTHER	See Table 12	See Table 12	See Table 12

TABLE 11: Parking Calculations. The Shared Parking Factor for two Functions, when divided into the sum of the two amounts as listed on the Required Parking table below, produces the Effective Parking needed for each site involved in sharing. Conversely, if the Sharing Factor is used as a multiplier, it indicates the amount of building allowed on each site given the parking available.

REQUIRED PARKING (See Table 10)

	T2 T3	T4	T5 T6
RESIDENTIAL	2.0 / dwelling	1.5 / dwelling	1.0 / dwelling
LODGING	1.0 / bedroom	1.0 / bedroom	1.0 / bedroom
OFFICE	3.0 / 1000 sq. ft.	3.0 / 1000 sq. ft.	2.0 / 1000 sq. ft.
RETAIL	4.0 / 1000 sq. ft.	4.0 / 1000 sq. ft.	3.0 / 1000 sq. ft.
CIVIC	To be determined by Warrant		
OTHER	To be determined by Warrant		

SHARED PARKING FACTOR



Building Function & Parking Calculations (sample), SmartCode. Credit: Duany Plater-Zyberk & Company.

Optional Components That May be Included in a Form-Based Code

Many form-based codes choose to include additional regulations, including standards for architectural, landscape, and block design, as well as green building. Other less-common standards address affordable housing, historic preservation, lighting, nonconforming uses, signage, and stormwater management.

Architectural Standards

Detailed standards regulating the exterior design features and materials of buildings are optional, but many communities have found that they are helpful in fulfilling the potential of a form-based code and achieving the community's vision.

Architectural standards can be included in a form-based code to complement the building form standards, which are required. While the code's building form standards set requirements for the main configuration, features, and functions of buildings that define and shape the public realm, architectural standards can go further, regulating the character and style of buildings, such as the proportion of windows, building materials, colors, trim design, and even the vertical and horizontal division of materials.

Some architectural standards are modest, and explained mostly through text; more elaborate standards may employ comprehensive diagrams (similar to those found in architecture pattern books) or rely on extensive photographs of buildings in the area that exemplify the architectural characteristics and styles the community wishes to preserve and foster in the future.

Multiple door & window shapes, sizes, & details

Porches, tower, & brick chimneys

Informal garden layout

True-divided lite sash windows w/ correct trim

*Porch w/ turned wood columns, milled details **

Native plantings, climbing vines, picket fence

Door w/ lites, trimmed windows in bay

Projecting bay windows, porch w/ brackets

Wrought iron fence, urns, and flower beds

G. Openings

a. Windows and doors are vertically proportioned, vertically oriented.
b. Windows are multi-paned, front doors have lites. Double hung is the primary window type.
c. Ground floor openings are larger in height and width. Upper floor openings are larger then common and of a variety of sizes.
d. Trim includes head, jamb, & sill which project out from wall surface. Sill is further pronounced.
e. Shutters are functional and when closed cover entire window or door opening.
f. Windows are typically not deeply recessed.

H. Attached Elements

a. Porches, bay windows, brows, awnings, towers, finials, crenelations, and chimneys are the architectural elements attached to the main mass of their buildings which define and enrich their overall form.
b. Attached elements receive the majority of the detail on facades. They are mostly reduced in polychrome painted wood. Minor elements are of decorative iron and brick.
c. Porch columns and balustrades are narrowly spaced and highly detailed.

* Photo source: The Abrams Guide to American House Styles, by William Morgan.

I. Site Definition and Landscape

a. Front yards are generally small and well defined by low fence at property line, or stoop in townhouse condition.
b. Front fences are brick or stone base w/ wrought iron, iron without base, or wood picket.
c. Large shade trees are mixed with typically heavy foundation plantings. The plant palette allows staggered blooming times to provide year-round color. The layout is more natural, paying credence to the style's origins.

Architectural Style Guideline, Uptown Whittier Specific Plan (2008), City of Whittier, California. Credit: Moule & Polyzoides, Architects and Urbanists.

CHAPTER 4: **DEVELOPMENT CODE**
4.6 ARCHITECTURE STYLE GUIDELINES

4.6.4 Main Street

Introduction. Main Street style buildings are found on most pre-World War II U.S. main streets and frame town squares and plazas. This building type began in the late nineteenth century when, in the process of densifying towns and cities, housing was built over shop fronts. As a style in the U.S., it is derived from a number of historic precedents, including Spanish Colonial, Greek Revival, Victorian, Victorian Italianate, and Richardsonian Romanesque adapted to urban contexts and mixed uses. The type's simple, rectangular form is derived from a logical, repetitive structural framework which is expressed externally by the rhythmic placement of columns, storefronts, and openings on upper levels. Original frameworks were of load-bearing masonry, but the style easily adapted to iron and steel construction. Buildings sit on street fronts or corners, oriented directly to streets or town squares. This means that only one or two facades need detailed design attention.

The Main Street style is expressed through substantial materials - such as brick, stone, and heavy plaster. Upper story window openings are located in a rhythmic serial pattern in singles or groups. The plane of the wall is articulated by structural expressions - engaged columns and lintels over openings. The ground floor has expansive glass storefronts interrupted by structural columns with transoms to allow light to penetrate deep into the interior. Multi-story facades are typically divided into base, body, and top with the ground floor taller than the shorter upper floors. Buildings are topped by a flat roof line emphatically crowned at the eaves by a projecting cornice or a receding, stepped parapet.

1. 2. 3. 4. 5. 6. 7. 8. 9. not shown

Key Characteristics

1. Roof - flat roof with projecting cornice or parapet.
2. Floor Plan/Elevation - simple, rectangular plans with L-shaped or U-shaped variations.
3. Base - articulated base by change in material, change in plane, or both.
4. Shading - recessed arcades & entries, balconies, or fabric awnings.
5. Form/Massing - 1 to multiple stories, with base, middle, and top. Vertically proportioned with corner towers common.
6. Walls - flat planes of stone, brick, or plaster, punctuated by deep openings.
7. Openings - large storefront openings at ground, vertically proportioned, with transoms arranged in rhythmic pattern. Upper floors include combinations of small and large openings relating to ground level openings. Serial or symmetrical composition are typical.
8. Articulation - base, middle and top of facade are clearly defined by changes in material and horizontal banding. Ground floor and/or building-scaled base receive most detailed attention. Other details include cornices, balconies, awnings.
9. Colors - public buildings are more reserved, with muted colors. Otherwise, the palette is open to interpretation.

4:39 **UPTOWN WHITTIER SPECIFIC PLAN,** City of Whittier, California

Architectural Standards - Main Street, Uptown Whittier Specific Plan (2008), City of Whittier, California. Credit: Moule & Polyzoides, Architects and Urbanists.

Specifically, typical regulations for architectural standards include:

- The overall shape and size of buildings, categorized by building types, such as single-family homes, multi-family residences, and commercial buildings.
- Roof types, materials, and pitch, along with specifications for dormers, gables, skylights, etc.
- Massing elements that may be added to the main portion of a building, such as wings and bays.
- The composition of façade elements, such as locations of windows and doors, in relation to building corners and one another.
- The types of windows and doors which are allowed, with specifications for height and width, overall proportions, depth, ornamentation, shutters, etc.
- Other architectural elements that may define the local character of a community, such as eaves, cornices, porches, and balconies.
- Which materials are allowed, and how they can be used together.

Block Standards

To address larger project sites (typically larger than two acres) and encourage the creation of walkable neighborhoods, form-based codes may include block and subdivision standards to guide the division of large development sites into an interconnected network of new streets that follow the code's public space standards and smaller blocks that meet the code's standards for maximum block perimeter and length.

Whether to Include Architectural Standards

Whether architectural standards are necessary or appropriate depends on the intended scope and objectives of a community's form-based code, as well as the capabilities of those who will be administering the code. For some communities, developing good standards for the design of its blocks and thoroughfares in the public realm is sufficient or the most politically/economically feasible option.

Absence of architectural standards can yield development that is better than that which would be produced under conventional zoning, but which falls short of realizing the community vision. Communities that are developing a form-based code for special districts are likely to have high expectations for historic compatibility and design quality, and architectural standards will often need to be developed accordingly.

While the inclusion of wisely-developed architectural standards can help make administration of the form-based code more objective, to successfully administer a code with substantial architectural standards, communities will need to have staff with expertise in architectural design (which is somewhat uncommon), hire the consultant services of a "town architect" (an extra expense beyond the means of many communities), or assign the administration duties to a design commission (which can complicate the process, especially for developers, who are likely to be skeptical of the new form-based code anyway).

A. Site

Sites larger than 4 acres shall be subdivided further to create additional blocks.

B. Introduce Streets

Sites being subdivided into additional blocks shall introduce streets from the list of existing and allowable street types and comply with the block-size requirements in Section 4.6.3.

C. Introduce Alleys

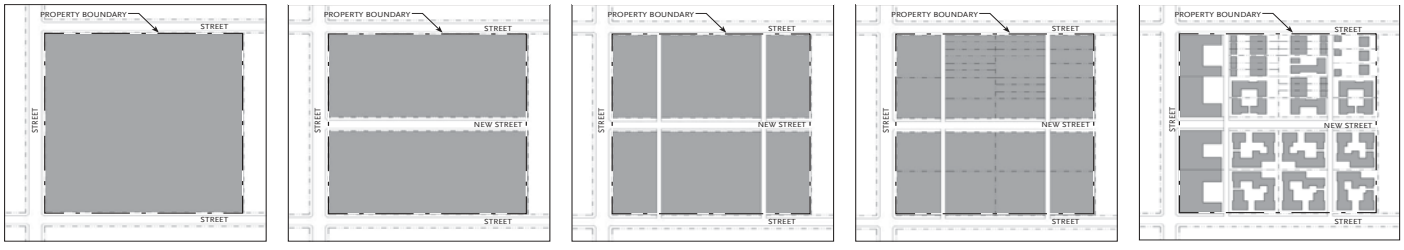
Access to blocks and their individual parcels is allowed only by alley/lane, side street or, in the case of residential development, via small side drives accessing multiple dwellings. The intent is to maintain the integrity and continuity of the streetscape without interruptions such as driveway access. Therefore, although residential development allows minor interruptions along the primary frontage, the introduction of rear service thoroughfares such as alleys and lanes is required.

D. Introduce Lots

Based on the type(s) of blocks created and the thoroughfare(s) that they front, lots (parcels) are introduced on each block to correspond with the allowable building types in Section 4.4.

E. Introduce Projects

Each lot is designed to receive a building per the allowable building types identified in Section 4.4 and can be arranged to suit the particular organization of buildings desired for each particular block. The allowable building types then are combined with the allowable Frontage Types in Section 4.5 per the Zone in Section 4.3 in which the lot is located, in order to generate a particular urban form and character.

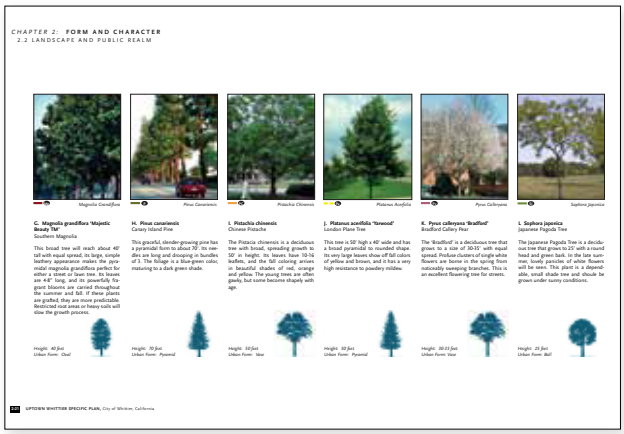


Site to be sudivided: Illustrative Diagram | *Introduce Streets: Illustrative Diagram* | *Introduce Alleys: Illustrative Diagram* | *Introduce Lots: Illustrative Diagram* | *Introduce Projects: Illustrative Photo*

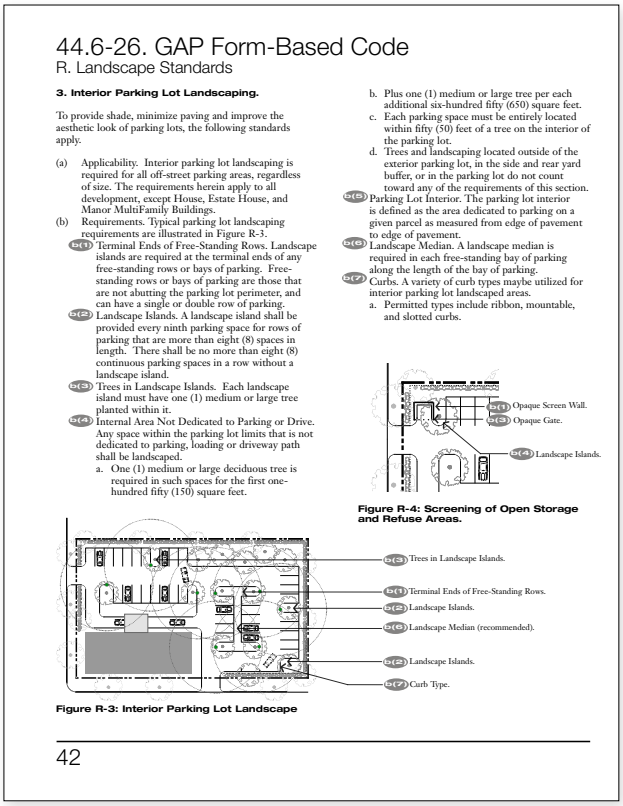
Procedure for Subdividing Land, Uptown Whittier Specific Plan (2008), City of Whittier, California. Credit: Moule & Polyzoides, Architects and Urbanists.

Landscape Standards

Some form-based codes include requirements to control the character and quality of the landscape within private spaces as it affects the public realm and the public good, such as requiring native species to address water usage, as well as screening parking lots from the street, buffering more or less intensive uses, and greening parking lots.



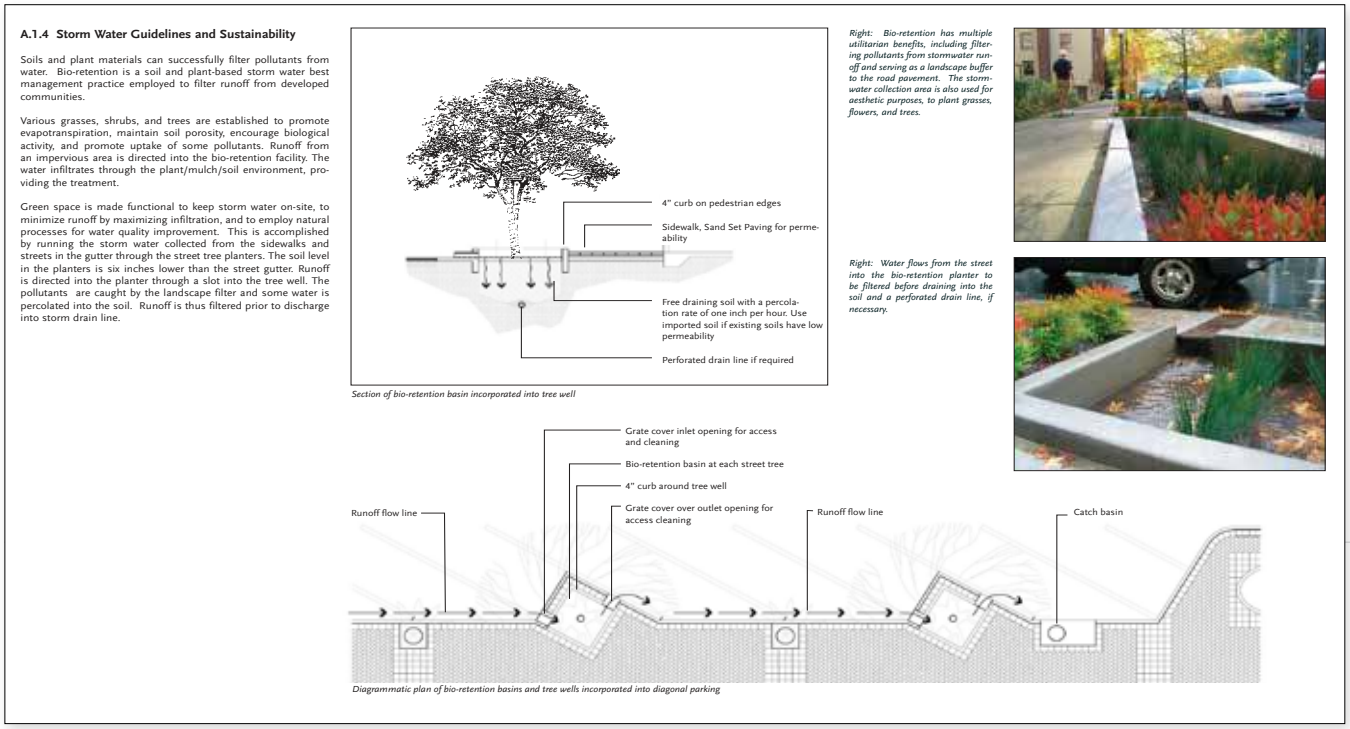
Landscape and Public Realm - Street Trees, Uptown Whittier Specific Plan (2008), City of Whittier, California. Credit: Moule & Polyzoides, Architects and Urbanists.



Landscape Standards, Gridley, Allin, & Prickett Neighborhood Form-Based Code (2007), City of Bloomington, Illinois. Credit: Farr Associates.

Green Building Standards

Requirements for environmentally sensitive, energy efficient, and low carbon footprint buildings can assist in achieving community sustainability goals.



Stormwater Guidelines and Sustainability, Uptown Whittier Specific Plan (2008), City of Whittier, California. Credit: Moule & Polyzoides, Architects and Urbanists.

Creating the Development Review Process

Finally, the code team—presumably guided, if not led, by municipal staff and elected officials—should define the process necessary for the submission and approval of development proposals once the form-based code is in place.

These include procedures for submitting, reviewing, and approving proposed development projects, along with a variety of optional sub-procedures, such as historic preservation review and the consideration of nonconformities. Essential rules guiding overall code administration are also included, such as rules for the interpretation of code requirements or resolving perceived conflicts between the form-based code and other municipal code provisions.

Administrative vs. Discretionary Review

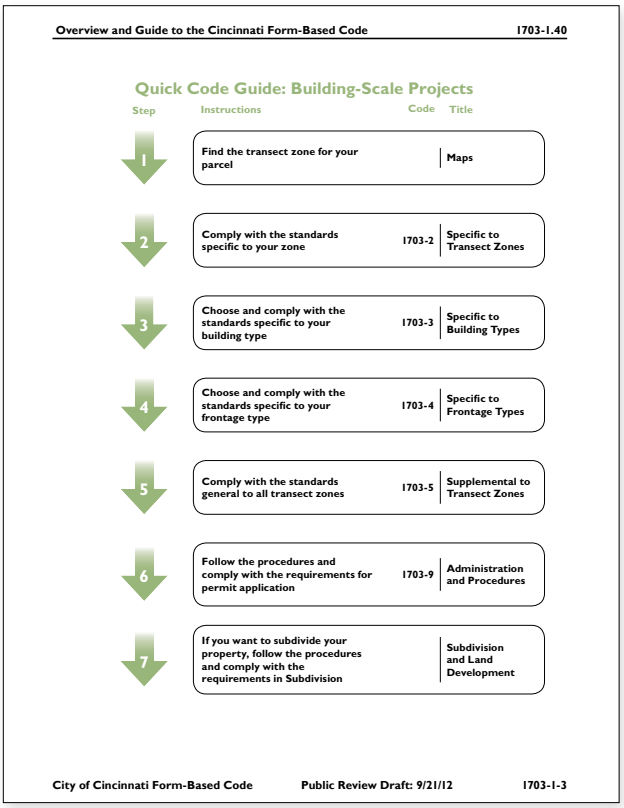
Defining the development review process can begin at the conclusion of the creation of the form-based code, or be tentatively established much earlier in the process, perhaps as one of the initial goals of the form-based code effort. One of the key questions will be whether submitted development proposals can largely be approved administratively by staff or if a discretionary body such as a planning commission or design review board is needed.

An important selling point for form-based codes is their potential to streamline the development review process. The requirements of a form-based code are aimed at ensuring predictability in the quality and character of future development, and have been defined by a very specific, comprehensive vision developed in conjunction with the community. Therefore, administrative review and approval should be possible for all projects that comply with applicable form-based code requirements. Similarly, one of the goals of a form-based code should be to make the review and approval process as easy as possible for existing municipal staff.

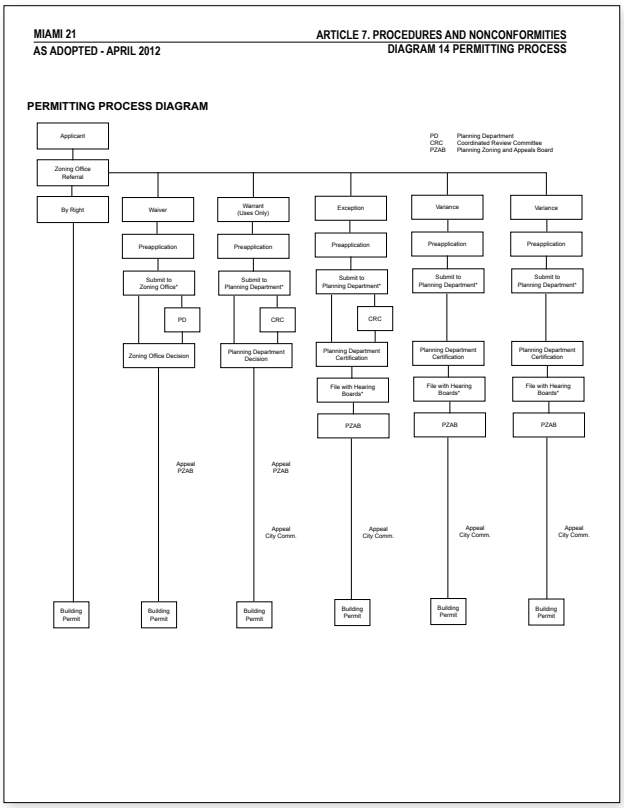
As a result, the substantial investment of time and other resources necessary to create a solid form-based code can be repaid by the reduction in time and resources necessary to review and assess individual development proposals in the future. In the end, administrative project review and approval can greatly reduce uncertainty and risk for developers, encouraging them to develop under it.

Variances

Some form-based codes will need to include a cautious variance process for dealing with development that is in-line with the community vision but proposed for sites with unusual characteristics that necessitate a relaxation or modification of specific requirements of the code.



Quick Code Guide - Building-Scale Projects, Cincinnati Form-Based Code (Public Review Draft, 2012), City of Cincinnati, Ohio. Credit: Opticos Design, Inc.



Permitting Process, Miami 21 Zoning Code (2012), City of Miami, Florida. Credit: Duany Plater-Zyberk & Company.

Nonconformities

Whether a community chooses to use conventional zoning approaches or a form-based code, the way in which it deals with development that does not conform with current standards—but which was legal when constructed—is an important indicator of the extent and speed of the changes it hopes to achieve by updating its zoning code. Determining the best approach depends on the local perceptions and priorities of the community; in some, a rigid approach may not be feasible in the near term, but delaying requirements for compliance or taking a case-by-case approach can threaten the effectiveness of the new form-based code.

Road Test the Code

Once the draft code provisions are completed, but before they are enacted, they should be tested using existing parcel dimensions and/or past or anticipated developments to determine how well the draft code addresses real world development and design issues. The code team and/or staff responsible for development review and approval (such as planning, public works, emergency services, and building officials) should apply the new form-based code procedures and requirements to determine whether the draft code would successfully implement the community's vision without being unnecessarily burdensome to the applicant. To thoroughly test the code, local developers should be invited to participate as well.

Monitor the Performance of the Code

After the code has been adopted, its performance should be systematically monitored by staff, applying criteria similar to that used to road test the code before adoption. The code can be amended as necessary on an annual basis.

2.0 Administration

2.1 REVIEW BODIES

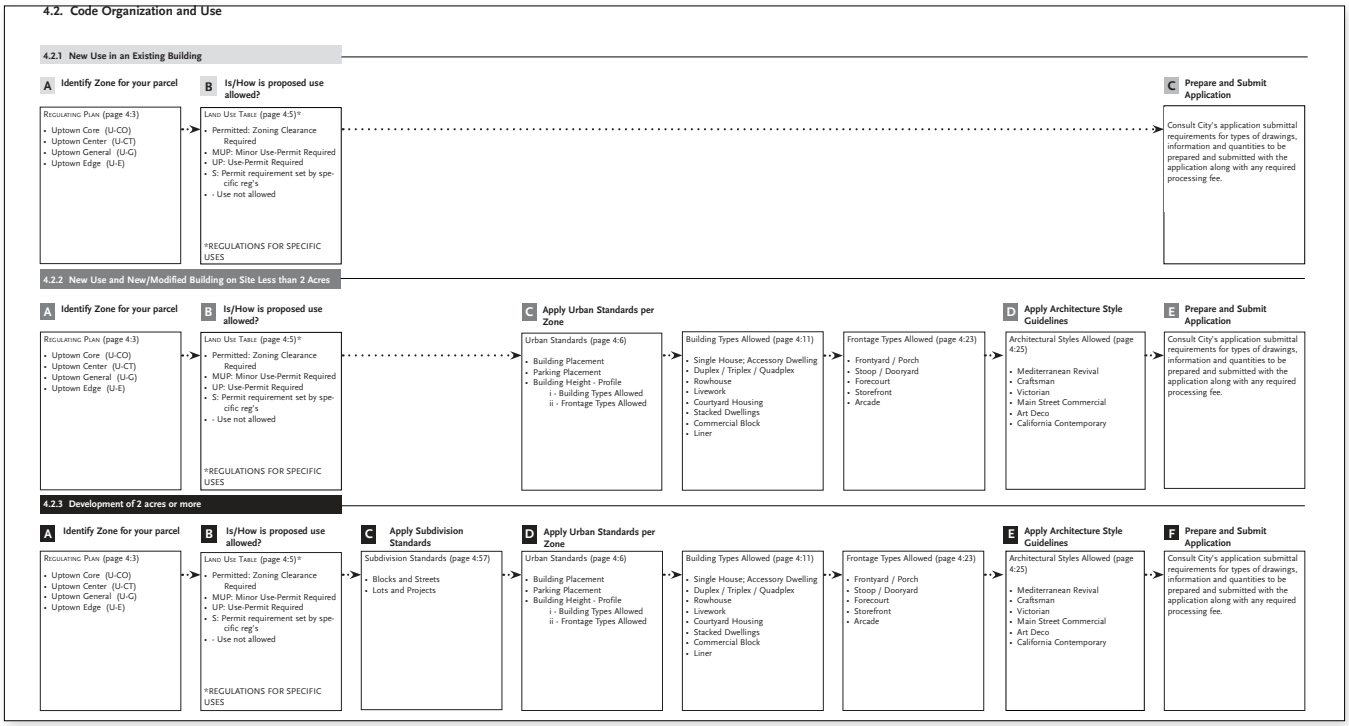
2.1.1 Summary of Review Authority

The following table summarizes the required review and approval authority provided under this development code.

	2.1.2	2.1.3	2.1.4	2.1.5	2.1.6	2.1.7	
Procedure	Zoning Administrator	Site Plan Review Board	Planning Commission	Zoning Commission	Zoning Board of Appeals	City Council	Reference
Zoning Compliance Certificates	D	R					2.2
Certificate of Occupancy	D						2.3
Administrative Deviation	D						2.4
Uses Permitted with Administrative Approval	D						2.5
Minor Variations without Site Plan Review	D						2.6
Minor Variations with Site Plan Review	D	R					2.6
Major Variations without Site Plan Review	R				<D>		2.6
Major Variations with Site Plan Review	R	R			<D>		2.6
Appeals					<D>		2.7
Amendments	R	R		<R>		<D>	2.8
Special Use	R	R		<R>		<D>	2.9
Official Development Plan	R	R		<R>		<D>	2.10
Critical Traffic Management Areas	R	R				<D>	2.11
Traffic Impact Analysis	R	R				R	2.12
Subdivision Plat (with waiver)	R		<R>			<D>	2.13
Subdivision Plat (without waiver)	D						2.13
Tract Survey	D						2.13
Multifamily Plan			<R>			<D>	2.13
Certificate of Appropriateness (oNC only)	R	R		<D>			7.1
Annexations	R		<R>			<D>	2.1.4

KEY: R = Review or Recommendation D = Final Decision <> = Public Hearing

Summary of Review Authority, Heart of Peoria Land Development Code (2007), Peoria, Illinois. Credit: Ferrell Madden/Code Studio.



Code Organization and Use, Uptown Whittier Specific Plan (2008), City of Whittier, California. Credit: Moule & Polyzoides, Architects and Urbanists.

Photo simulation of proposed changes to the intersection of Sycamore Avenue at San Pablo Boulevard, Central Hercules Plan (2001), City of Hercules, California.
Credit: Urban Advantage (www.urban-advantage.com).

Conclusion

There are many options for municipalities that want to preserve or encourage a particular sense of place in their community. However, most find it difficult to do so.

One reason is conventional zoning's narrow focus on what uses are permitted (or rather what uses are prohibited). While this approach has been remarkably successful at protecting the health and safety of the public over nearly a century, conventional zoning has neglected to provide guidance—some would say leadership—on what the physical character of our communities should be.

How Flexible?

Admittedly, our individual aesthetic preferences are diverse. Some critics contend that form-based codes threaten to dictate architectural style, which encourages the creation of "cookie cutter" communities as monotonous as those they are meant to surpass. Many of these same critics observe that form-based codes and other design standards tend to favor architectural styles or features from specific—and possibly idealized—eras in the past, rather than addressing the actual needs and preferences of people living today (porches that are charming but rarely used are often cited as an example). Some even believe that conventional zoning, by focusing on what uses are permitted, allows for greater freedom in the design of our communities, from large urban areas to the buildings we call home.

Advocates counter that form-based codes are exceedingly flexible, and can be made to not only allow but facilitate a broad scope of architectural, landscape, and urban design in a community. At the same time, many of them will acknowledge that the most successful form-based codes tend to be those in which the community has comprehensively identified the specific details of form that it wants and will require of future development.

Will It be Accepted by Developers?

Some developers have expressed unease about having to adapt to a new system of regulation and development review, often complaining that the existing development review process (typically following conventional methods of zoning and regulation) is already too onerous and frustrating. Indeed, it's not uncommon for communities with exacting standards regarding use to be attracted to form-based codes, but choose to simply add a new layer of regulation to existing requirements.

However, the development of a comprehensive form-based code usually requires a community to reassess its existing system of development regulation. In addition, the greater precision and predictability inherent in most form-based codes can offer a community the opportunity to streamline the development review process, often with the aim of persuading local developers to support the new code and, ultimately, to encourage the type of development wanted by the community.

An Approach Deserving Wider Recognition

In the end, form-based codes are but one approach available to communities, but it is one that deserves wider recognition among municipal staff and elected officials. The term "form-based codes" is becoming familiar to many, but relatively few understand how they work, how adaptable they can be, and what would be entailed in creating one for their community. CMAP hopes that this guide will help advance that understanding within our region.

Learn More

This guide to form-based codes is intended as an introduction. We hope that it will help local staff, elected officials, and residents in municipalities throughout our region determine whether a form-based code might be right for their community.

Most communities will want to gain a fuller understanding of the details of form-based codes before they embark on the process of creating one. Fortunately, many resources are available for communities that want to take that next step.

Form-Based Codes Institute

Based in Chicago, FBCI is a non-profit professional organization dedicated to advancing the understanding and use of form-based codes throughout the United States. As part of its core mission, FBCI develops standards for form-based codes, identifying the essential elements of a well-crafted code and highlighting the best examples for other communities to learn from.

FBCI's website (www.formbasedcodes.org) provides several resources on form-based codes, including definitions, sample codes that exhibit best practices, a posting of current RFPs from communities developing form-based codes, and a sample RFQ that municipalities can use, along with an evaluation checklist to help communities evaluate consultant qualifications and work proposals.

FBCI provides education for municipal staff, elected officials, and residents engaged in planning for their communities. At present, FBCI offers the following courses, led by several of the world's leading experts on form-based codes, who continually review and write codes in their work:

FBC 101e: ABCs of FBCs On-Line

An 8-hour web-based course that provides a comprehensive introduction to the principles and components of form-based codes, as powerful regulatory tools to shape community form and character. The course is composed of eight segments arranged in sequential order, with recorded presentations, reading assignments and a virtual field exercise, which can be completed at the convenience of the participant in a single day or during a period of up to six weeks.

FBC 201: Preparing a Form-Based Code - Design Considerations

An advanced course for individuals who have completed FBC 101e. During two days, participants gain an in-depth understanding of urban form for a regulatory framework, exploring design possibilities for greenfield sites, redevelopment sites, already built-out communities, and regional plans. Instructors explain how design principles are applied to create the basic elements of a form-based code (such as building form and public space standards), through lecture and case study, combined with "hands-on" participatory exercises.

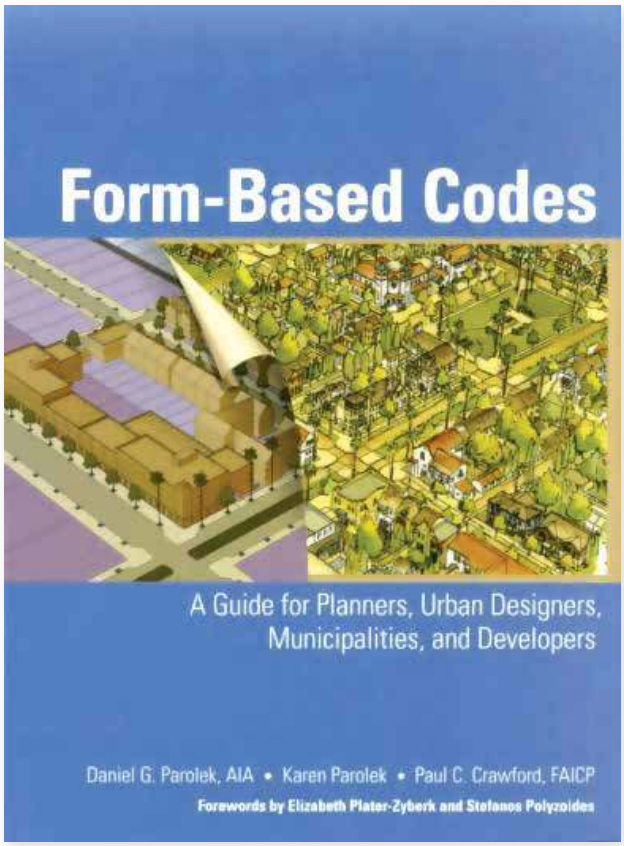
FBC 301: Completing, Adopting and Administering the Code

A two-day, advanced course for individuals who have completed FBC 101e, detailing the mechanics of creating, adopting, and administering a form-based code in a community, including:

- How to structure the coding process, including what must happen before and after the code is drafted.
- The legal aspects of adopting a form-based code (for example, its consistency with a comprehensive plan).
- What to keep or discard from an existing conventional code.
- The advantages and disadvantages of mandatory, parallel, and floating-zone form-based codes.
- The role of design standards within the development review process.
- How form-based codes are adopted and implemented.
- Insulating against potential challenges.

Form-Based Codes: A Guide for Planners, Urban Designers, Municipalities, and Developers

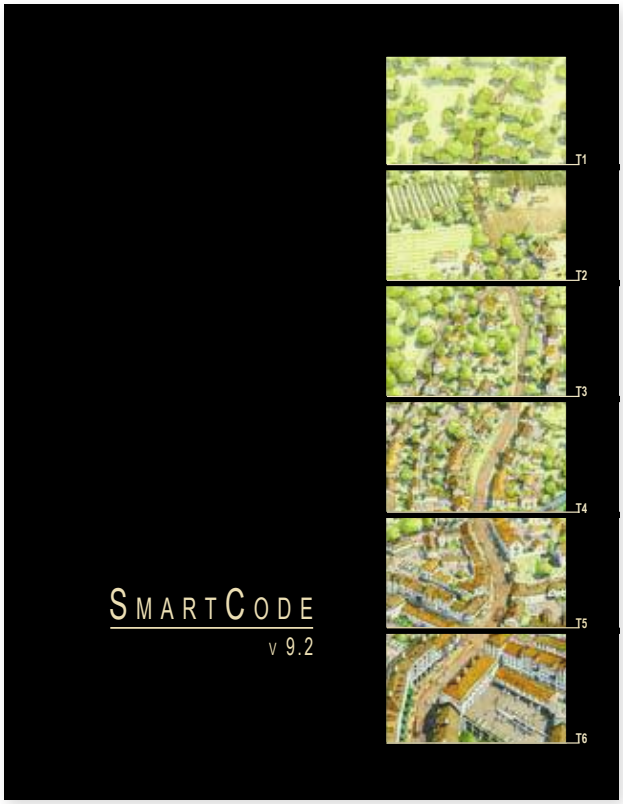
To explain how a form-based code can be developed, this guide follows the approach recommended by architects Daniel and Karen Parolek of Opticos Design, Inc. (www.opticosdesign.com), authors (with Paul Crawford) of *Form-Based Codes: A Guide for Planners, Urban Designers, Municipalities, and Developers* (John Wiley & Sons, 2008). At present, their textbook offers the most comprehensive explanation of how form-based codes work and how they are created, drawing upon years of experience developing award-winning form-based codes for communities across the nation (many of which are featured in the images included in this guide). The book is lavishly illustrated with diagrams, maps, plans, and renderings from numerous case studies that demonstrate best practices in the creation of form-based codes.

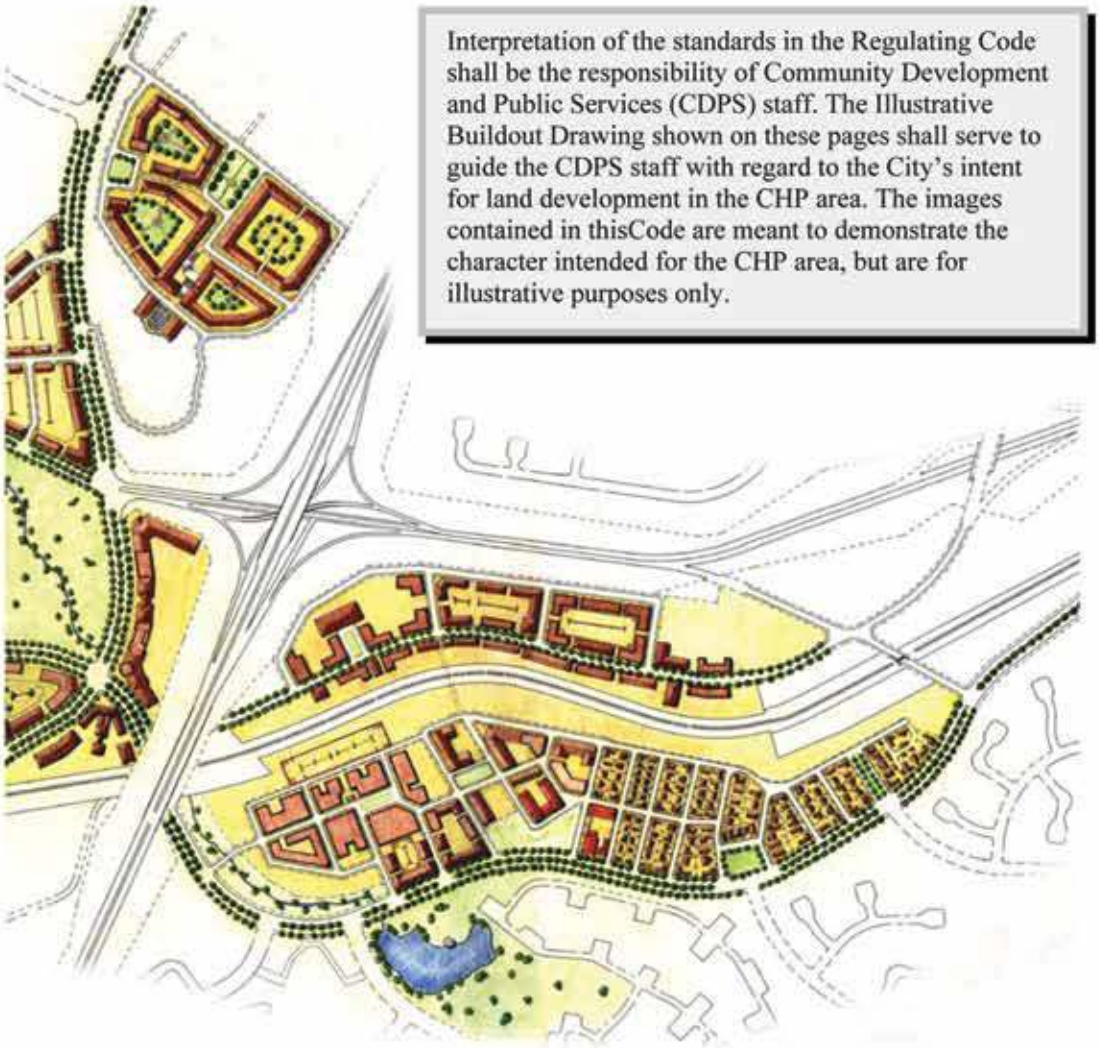


SmartCode

The SmartCode is a comprehensive, transect-based form-based code template (or "model ordinance") that includes model language, standards, and requirements for multiple scales of development by the public and private sectors, as well as administrative procedures for development review and approval. It is intended to be customized to the local context, priorities, and legal requirements of each community that uses it.

Approachable and relatively easy to follow, it has been used by several communities across the United States, and refined over the years due to the fact that it is "open source" and free of charge. It is available for download at www.smartcodecentral.org.





Interpretation of the standards in the Regulating Code shall be the responsibility of Community Development and Public Services (CDPS) staff. The Illustrative Buildout Drawing shown on these pages shall serve to guide the CDPS staff with regard to the City's intent for land development in the CHP area. The images contained in thisCode are meant to demonstrate the character intended for the CHP area, but are for illustrative purposes only.

How to Use the Regulating Code

1. Determine whether your use is permitted in the Central Hercules Plan area.
2. Determine whether your site falls within the Waterfront District, Central Quarter, Hospitality Corridor, or Hilltown.
3. Determine which Street Type your lot fronts. (If you have a corner lot, you must determine the primary space or street based on the hierarchy on page II-2. Review Chapter II for provisions about the Street Type that corresponds to the lot.
4. Review the Use Table (Chapter III) and the General Provisions (Chapter VI) which apply throughout the Central Hercules Plan area.
5. Review the Projecting Façade Elements and Architectural Regulations (Chapter IV) which contain specific rules for Buildings.

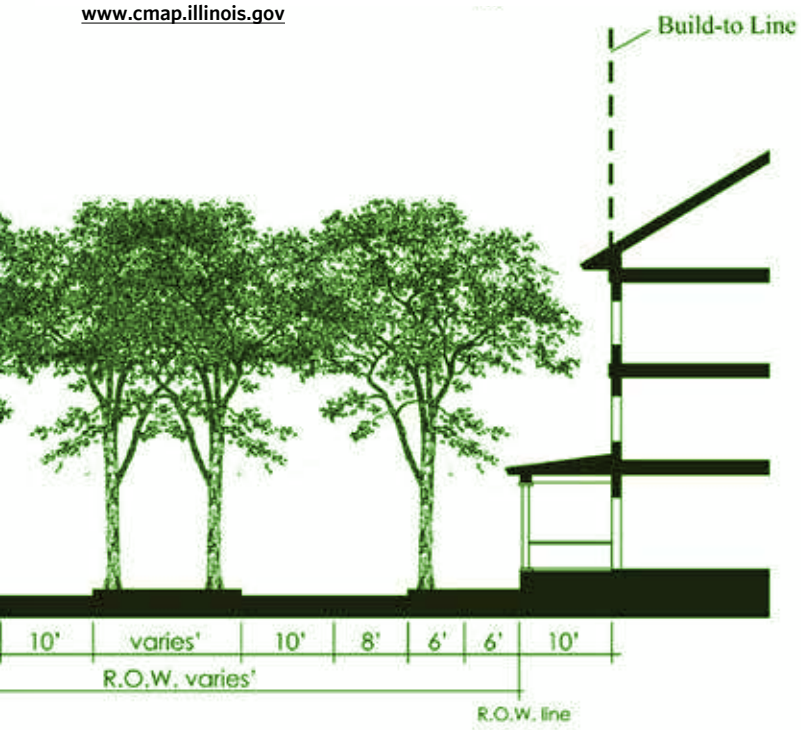
Central Hercules Plan (2001), City of Hercules, California.
Credit: Dover, Kohl & Partners.

Chicago Metropolitan
Agency for Planning

233 South Wacker Drive, Suite 800
Chicago, IL 60606

312-454-0400
info@cmap.illinois.gov

www.cmap.illinois.gov



Attached Main Street buildings form a unified streetscape along a vibrant commercial street.

Main Street building with bay windows and bright shopfronts

Main Street building with a variety of shopfront sizes.

A. Description

The Main Street Mixed-Use Building Type is a small- to medium-sized structure, typically attached, intended to provide a vertical mix of uses with ground-floor retail, or service uses and upper-floor service, or residential uses. This Type makes up the primary component of a neighborhood main street and portions of a downtown main street, therefore being a key component to providing walkability.

T3E T3N
T4N.1 T4N.2
T5MS T5N.1 T5N.2 T5F
T6C

Key

T# Allowed T# Not Allowed

General Note: Photos on this page are illustrative, not regulatory.