April 2, 2020

Ms. Jennifer Andrews
City of Waukesha Community Development Dept.
201 Delafield Street, Room 200
Waukesha, WI 53188

via Email: jandrews@waukesha-wi.gov

RE: Preliminary Site and Architectural Plan Submittal
Springhouse Waukesha
200 Delafield Street

Dear Jennifer,

Thank you to the City of Waukesha for its collective efforts on this project to date. We are pleased to submit the enclosed site and architectural plans for formal consideration by City Staff. Our design efforts have carefully addressed many comments to date and have been further developed following close collaboration with our construction and property management divisions. Horizon's 35+ years' experience in senior housing guided us to include various design and programmatic elements, and we are confident that the residential units and support spaces will create a successful and vibrant living environment in the community. We certainly invite as much feedback as possible from all City staff – this is a critical time to make sure all parties are included and have a chance to offer feedback, as design progression from here will take a very detailed path toward construction documents. With this in mind, and following the City's guidance from a recent meeting, we are also requesting that the enclosed plans be routed to members of City of Waukesha Plan Commission to for informational feedback, estimated to occur at the April 2020 Plan Commission meeting. This will aid with design refinement and allow us to continue working efficiently toward project commencement.

Narrative Description of Project

Overall Development
The 5.5-acre redevelopment site will be divided into three separate parcels via Certified Survey Map (CSM) submitted at a later date. Please see the land use map attached as an approximate illustration. Phase I will include senior market rate apartments and will be located in the middle portion of the overall site (the subject of this submittal). Phases II and III are future developments, with exact uses and timetables to be determined. It has been discussed that commercial development will occur on the southernmost parcel, and a second residential phase will be developed on the northernmost parcel. Commercial development will be managed by Luther Group of Elm Grove, Wisconsin and residential development will be managed by Horizon Development Group of Madison, Wisconsin, both of which were selected as the development team through the City's RFP process.

Phase I Development
Horizon is proposing to develop a 78-unit senior market rate housing community. The facility will be situated on 1.99 acres of land and feature 3-story, wood frame construction with full underground parking. The building will feature a mix of one-, two-, and three-bedroom unit layouts; the current

design includes thirty six (36) one-bedroom, thirty six (36) two-bedroom, and six (6) three-bedroom units, with each unit including a full kitchen, private patio or balcony, individually controlled heating and cooling, in-unit washer and dryer, and attractive finishes. Residents will have access to a variety of common amenities and conveniences within the building, including a trash chute, storage lockers, package delivery room, exercise room with equipment, resident lounge, two-story grand clubroom with views of the courtyard, and heated, secure underground parking. Outdoor spaces will include a lounge area with fire pit, built-in grill with table seating, gazebo structure with seating, walking paths, possible dog run, and an exercise area that could include pickleball, yoga, outdoor dancing events, or other programs to be determined.

The building exterior will be comprised of approximately 15-20% masonry (brick) with Hardi or LP Smartside siding. Traditional pitched roof design will be utilized to complement surrounding residential uses and maintain consistency with neighborhood preferences.

Two vehicular access points serve the proposed development. The main access point was aligned with/centered on the Buena Vista intersection. This access point serves the main parking lot and accessible building entrance. The second access point is for underground parking and non-emergency parking/loading, located on the south end of the building. Non-emergency parking was requested by the City of Waukesha Fire Department, and this location was decided as it could also serve delivery and moving functions to support residents.

Development Summary Statistics

Total Development Area:	239,664 square feet (5.50 acres)
Phase I Development Area:	86,848 square feet (1.99 acres)
Proposed Dwellings:	78 apartment units
Target Demographic:	Senior 55+, Market Rate
Building Height:	3-story over underground parking

Unit Mix

1-Bedroom:	36
2-Bedroom:	36
3-Bedroom:	6
Total:	78

Vehicle Parking

Structured:	78
Surface:	26
Total:	104

Project Team

Applicant/Developer:	Horizon Development Group, Inc. – Scott Kwiecinski 5201 East Terrace Drive, Suite 300 Madison, WI 53718
Architect:	Knothe Bruce Architects – Kevin Burow 7601 University Avenue, Ste 201 Middleton, WI 53562

Civil Engineer:	Pinnacle Engineering – Aaron Koch 20725 Watertown Rd., Suite 100 Brookfield, WI 53186
General Contractor:	Horizon Construction Group, Inc. – Mick Hintz 5201 East Terrace Drive, Suite 300 Madison, WI 53718
Property Manager:	Horizon Management Services, Inc. – Becky Hildebrandt 5201 East Terrace Drive, Suite 300 Madison, WI 53718

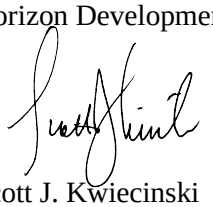
Enclosed for your review are the following plan sheets, consistent with the City of Waukesha's preliminary site and architectural submittal requirements.

1. Color architectural elevations of all sides of the building and color perspective renderings
2. Site Plan
3. Grading Plan
4. Stormwater Management Plan
5. Utility Plan
6. Conceptual Landscape Plan
7. Attachments A, B, C & D

Please contact us if you have any questions or require additional information. Thank you in advance for your review, and we look forward to establishing a meeting date to discuss feedback.

Respectfully submitted,

Horizon Development Group, Inc.



Scott J. Kwiecinski
Development Manager

1 / A-2.1 North
1" = 10'-0"

2 / A-2.1 South
1" = 10'-0"

knothe bruce ARCHITECTS
knothebruce.com 608.836.3690
7601 University Ave. • Suite 201 • Middleton, WI 53562

KEY PLAN

ISSUED
March 30, 2020

PROJECT TITLE
SPRINGHOUSE
WAUKESHA

200 Delafield St.
Waukesha, WI

SHEET TITLE
EXTERIOR
ELEVATIONS

SHEET NUMBER
A-2.1

PROJECT NUMBER 0000

1 A-2.2 East
1" = 10'-0"

2 A-2.2 West
1" = 10'-0"

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EXTERIOR
ELEVATIONS

SHEET NUMBER

A-2.2

PROJECT NUMBER 0000

1 / A-2.3 Courtyard North
1" = 10'-0"

2 / A-2.3 Courtyard South
1" = 10'-0"

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A-2.3

PROJECT NUMBER 0000

SPRINGHOUSE

WAUKESHA

kba
knothe bruce
ARCHITECTS

SPRINGHOUSE

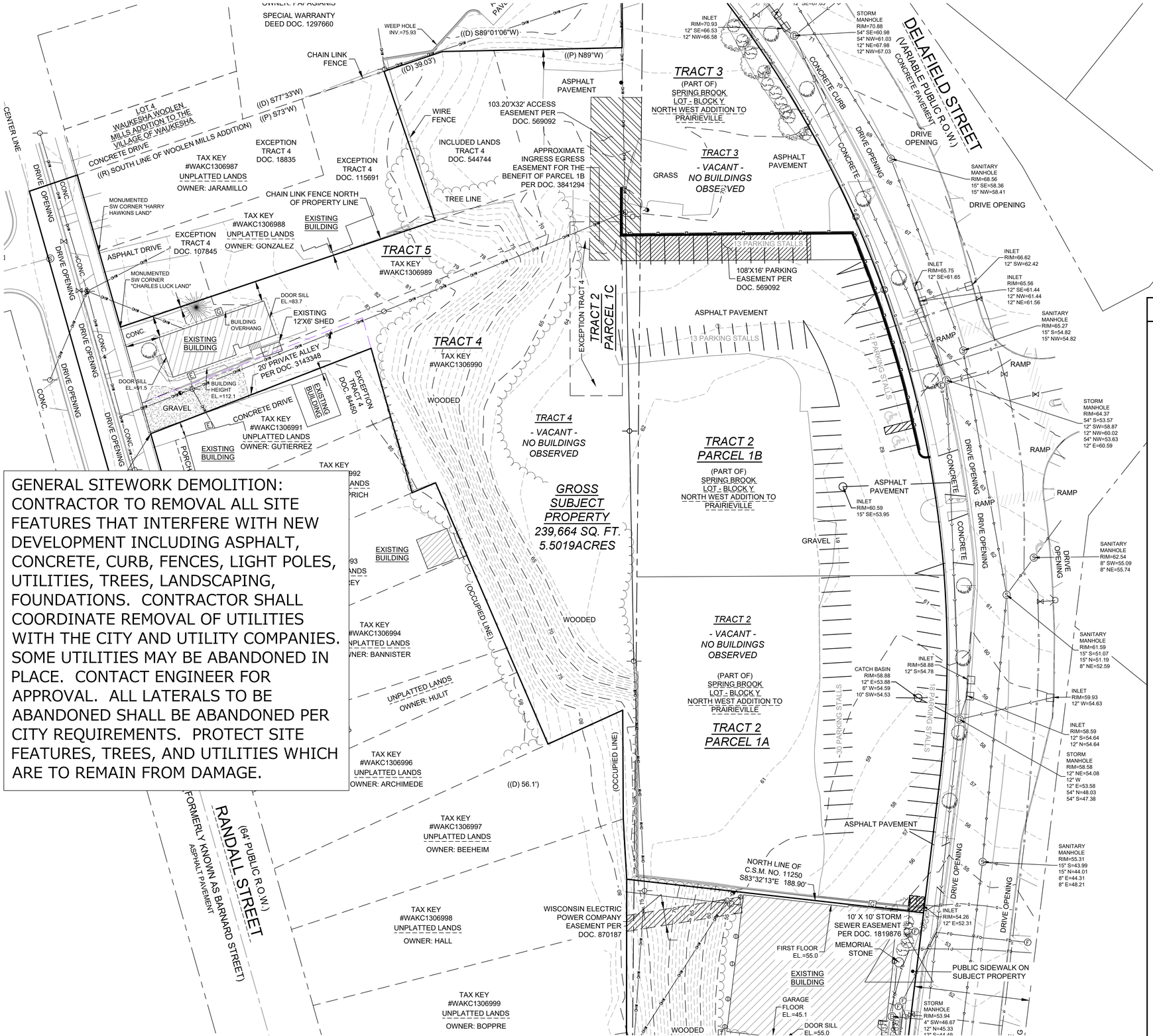
WAUKESHA

kba
knothe bruce
ARCHITECTS

SPRINGHOUSE

WAUKESHA

kba
knothe bruce
ARCHITECTS



GENERAL SITEWORK DEMOLITION: CONTRACTOR TO REMOVAL ALL SITE FEATURES THAT INTERFERE WITH NEW DEVELOPMENT INCLUDING ASPHALT, CONCRETE, CURB, FENCES, LIGHT POLES, UTILITIES, TREES, LANDSCAPING, FOUNDATIONS. CONTRACTOR SHALL COORDINATE REMOVAL OF UTILITIES WITH THE CITY AND UTILITY COMPANIES. SOME UTILITIES MAY BE ABANDONED IN PLACE. CONTACT ENGINEER FOR APPROVAL. ALL LATERALS TO BE ABANDONED SHALL BE ABANDONED PER CITY REQUIREMENTS. PROTECT SITE FEATURES, TREES, AND UTILITIES WHICH ARE TO REMAIN FROM DAMAGE.

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 30' 60'

LEGEND

	EXISTING	PROPOSED
SANITARY SEWER MANHOLE	S	
STORM SEWER MANHOLE	ST	
STORM SEWER CATCH BASIN (ROUND CASTING)		
STORM SEWER CATCH BASIN (RECTANGULAR CASTING)		
PRECAST FLARED END SECTION		
CONCRETE HEADWALL		
VALVE BOX		
FIRE HYDRANT		
CLEANOUT		
SANITARY SEWER		
FORCE MAIN		
STORM SEWER		
DRAIN TILE		
WATER MAIN	W	W
FIRE PROTECTION		FP
ELECTRICAL CABLE	E	E
OVERHEAD WIRES	OHW	OHW
GAS MAIN	G	G
TELEPHONE LINE	T	T
UTILITY CROSSING		X
CAUTION EXISTING UTILITIES NEARBY		CAUTION
GRANULAR TRENCH BACKFILL		
LIGHTING		
ELECTRICAL TRANSFORMER OR PEDESTAL	TF	E
POWER POLE		
POWER POLE WITH LIGHT		
GUY WIRE		
STREET SIGN		
CONTOUR	749	749
SPOT ELEVATION	×(750.00)	750.00
WETLANDS	WT	
PRIMARY ENVIRONMENTAL CORRIDOR	PEC	
FLOODWAY		
FLOODPLAIN		
HIGH WATER LEVEL (HWL)		
NORMAL WATER LEVEL (NWL)		
DIRECTION OF SURFACE FLOW		GRADE / PAVEMENT
DITCH OR SWALE		
DIVERSION SWALE		
OVERFLOW RELIEF ROUTING		
TREE WITH TRUNK SIZE		
SOIL BORING		B-1
TOPSOIL PROBE		T-1
FENCE LINE, TEMPORARY SILT	SF	SF
FENCE LINE, WIRE		
FENCE LINE, CHAIN LINK OR IRON		
FENCE LINE, WOOD OR PLASTIC		
CONCRETE SIDEWALK		
CURB AND GUTTER		
DEPRESSED CURB		
REVERSE PITCH CURB & GUTTER		
EASEMENT LINE		

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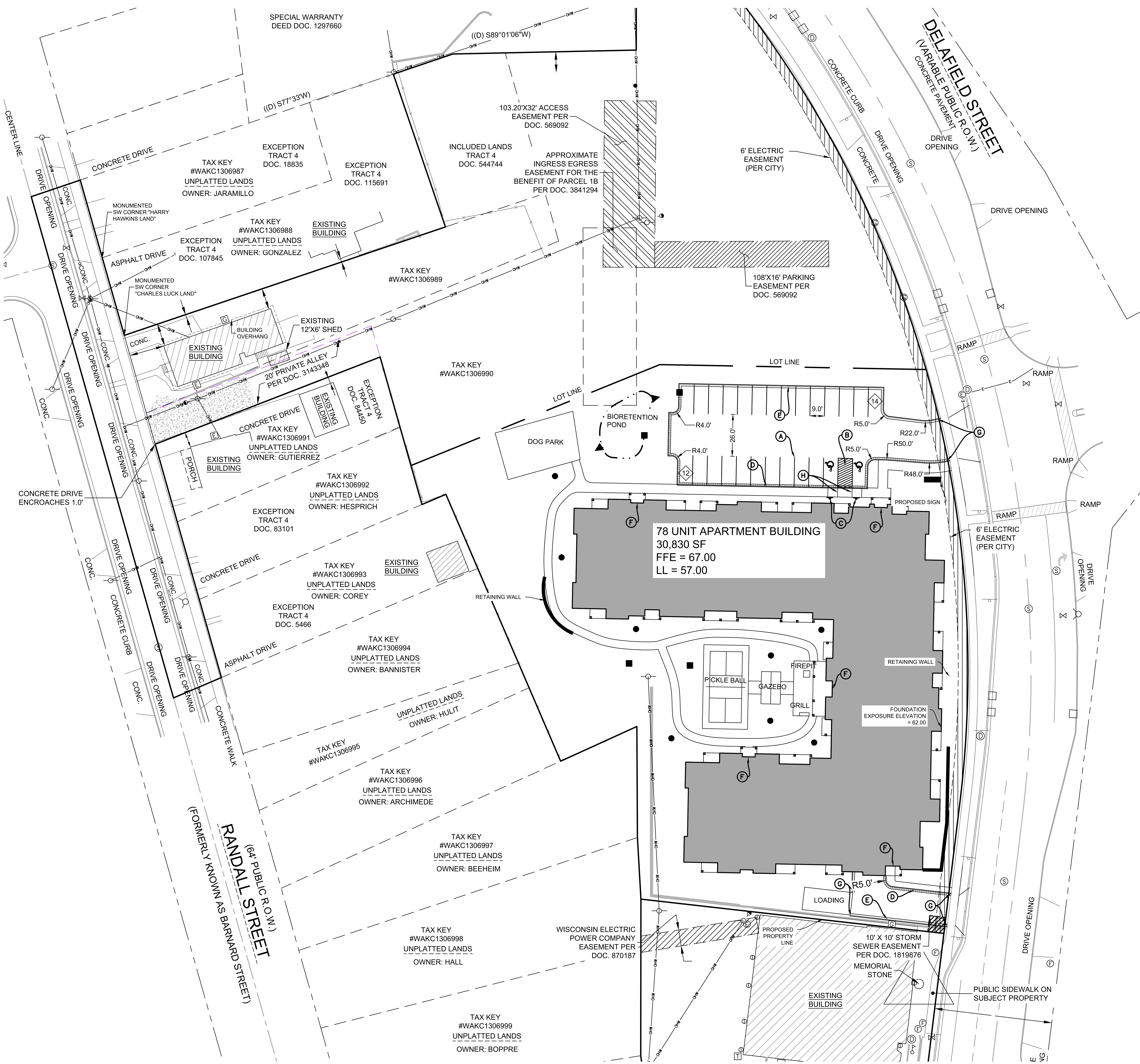
SPRINGHOUSE
WAUKESHA

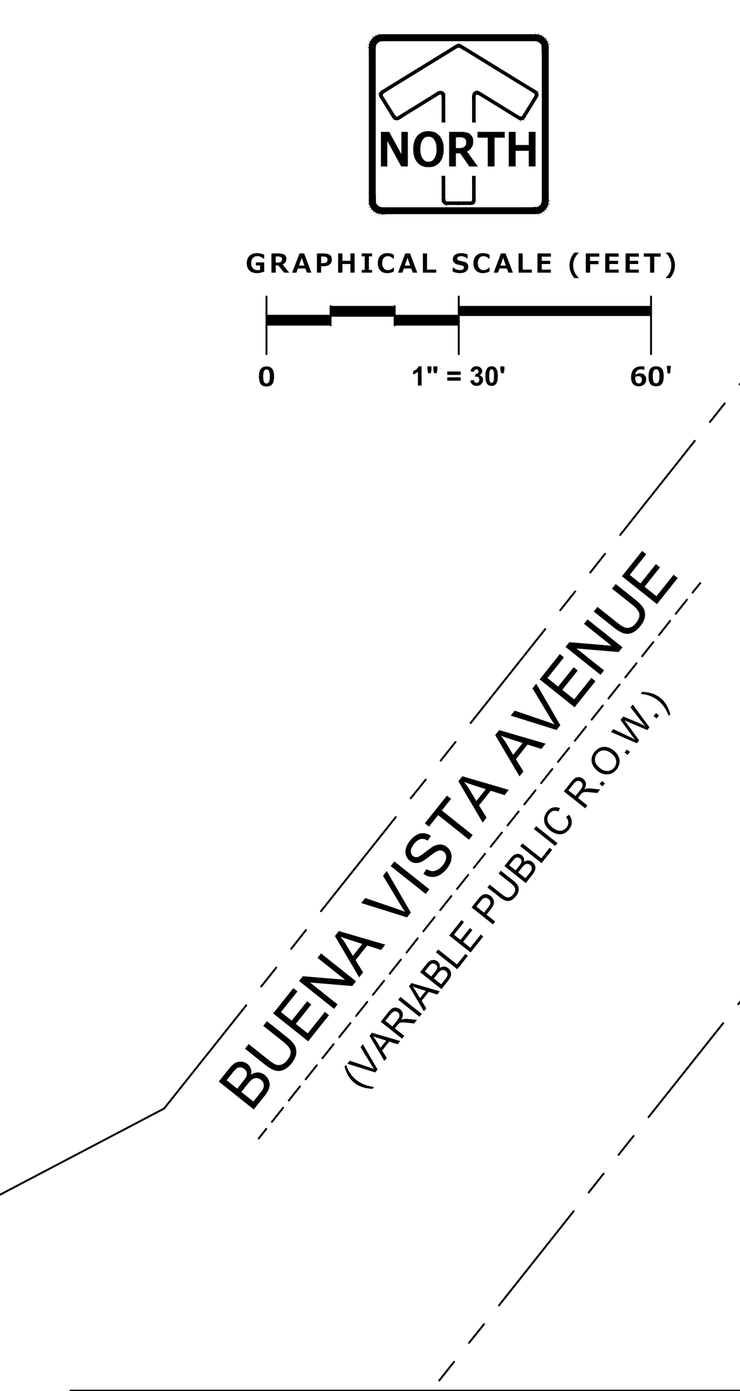
200 Delafield St.
Waukesha, WI

SHEET TITLE
EXISTING CONDITIONS PLAN

SHEET NUMBER
C-0

PROJECT NO.





LEGEND

- REGULAR PAVEMENT
- CONCRETE SIDEWALK

- (A) 4" SOLID WHITE STRIPE
- (B) 4" DIAGONAL AT 45° SPACED 2' O.C.
- (C) R7-8 HANDICAP PARKING SIGN (SEE DETAIL)
- (D) 18" REVERSE VERTICAL FACE CURB & GUTTER (SEE DETAIL)
- (E) 18" VERTICAL FACE CURB & GUTTER
- (F) BUILDING DOOR SLAB (2% MAX SLOPE 5' WITHIN DOOR)
- (G) TAPERED CURB HEAD (SEE DETAIL)
- (H) ADA RAMP (SEE DETAIL)
- (I) STAIR

- (16) PARKING COUNT (FOR INFORMATION ONLY, NOT TO BE PAINTED)
- REVERSE CURB & GUTTER

SITE DATA TABLE
TOTAL SITE AREA = 2.00 AC
TOTAL DISTURBED SITE AREA = 2.38 AC
NEW BUILDING SF = 30,684 SF
EXISTING IMPERVIOUS AREA FOR SITE = 65,207 SF
PROPOSED IMPERVIOUS FOR THE SITE = 41,517 SF
26 TOTAL SURFACE PARKING SPOTS
ADA SPOTS REQUIRED = 2
ADA SPOTS PROVIDED = 2
ADA VAN ACCESSIBLE SPOTS REQUIRED = 1
ADA VAN ACCESSIBLE SPOTS PROVIDED = 1

NOTES

1. ALL EXISTING SIDEWALK AND CURB DAMAGED DURING CONSTRUCTION MUST BE REPLACED PER CITY STANDARDS

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SPRINGHOUSE WAUKESHA

200 Delafield St.
Waukesha, WI

SHEET TITLE
SITE PLAN

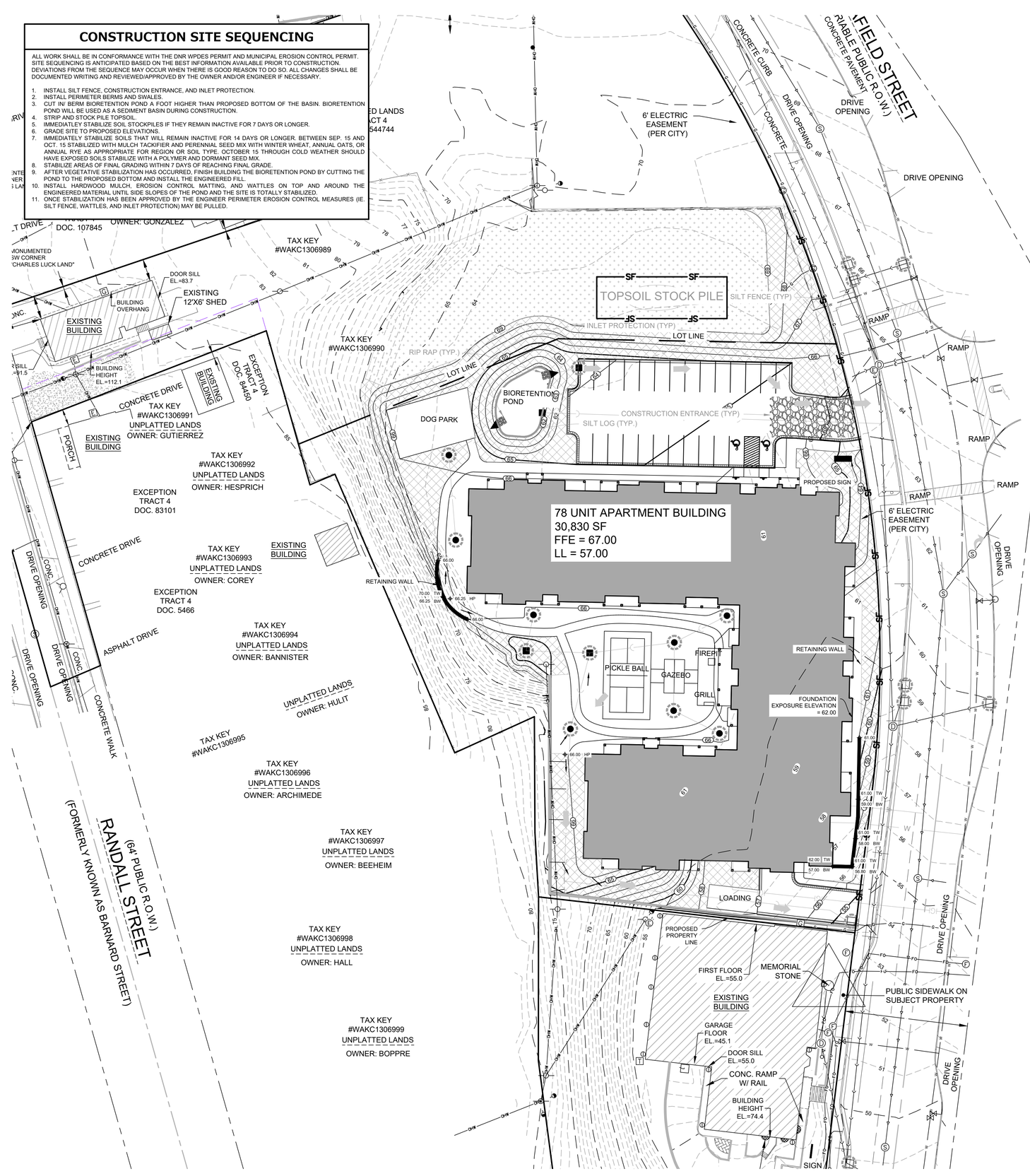
SHEET NUMBER
C-1

PROJECT NO.

CONSTRUCTION SITE SEQUENCING

ALL WORK SHALL BE IN CONFORMANCE WITH THE DNR WPDES PERMIT AND MUNICIPAL EROSION CONTROL PERMIT. SITE SEQUENCING IS ANTICIPATED BASED ON THE BEST INFORMATION AVAILABLE PRIOR TO CONSTRUCTION. DEVIATIONS FROM THE SEQUENCE MAY OCCUR WHEN THERE IS GOOD REASON TO DO SO. ALL CHANGES SHALL BE DOCUMENTED WRITING AND REVIEWED/APPROVED BY THE OWNER AND/OR ENGINEER IF NECESSARY.

1. INSTALL SILT FENCE, CONSTRUCTION ENTRANCE, AND INLET PROTECTION.
2. INSTALL PERIMETER BERMS AND SWALES.
3. CUT IN/ BERM BIORETENTION POND A FOOT HIGHER THAN PROPOSED BOTTOM OF THE BASIN. BIORETENTION POND WILL BE USED AS A SEDIMENT BASIN DURING CONSTRUCTION.
4. STRIP AND STOCK PILE TOPSOIL.
5. IMMEDIATLEY STABILIZE SOIL STOCKPILES IF THEY REMAIN INACTIVE FOR 7 DAYS OR LONGER.
6. GRADE SITE TO PROPOSED ELEVATIONS.
7. IMMEDIATELY STABILIZE SOILS THAT WILL REMAIN INACTIVE FOR 14 DAYS OR LONGER. BETWEEN SEP. 15 AND OCT. 15 STABILIZED WITH MULCH TACKIFIER AND PERENNIAL SEED MIX WITH WINTER WHEAT, ANNUAL OATS, OR ANNUAL RYE AS APPROPRIATE FOR REGION OR SOIL TYPE. OCTOBER 15 THROUGH COLD WEATHER SHOULD HAVE EXPOSED SOILS STABILIZE WITH A POLYMER AND DORMANT SEED MIX.
8. STABILIZE AREAS OF FINAL GRADING WITHIN 7 DAYS OF REACHING FINAL GRADE.
9. AFTER VEGETATIVE STABILIZATION HAS OCCURRED, FINISH BUILDING THE BIORETENTION POND BY CUTTING THE POND TO THE PROPOSED BOTTOM AND INSTALL THE ENGINEERED FILL.
10. INSTALL HARDWOOD MULCH, EROSION CONTROL MATTING, AND WATTLES ON TOP AND AROUND THE ENGINEERED MATERIAL UNTIL SIDE SLOPES OF THE POND AND THE SITE IS TOTALLY STABILIZED.
11. ONCE STABILIZATION HAS BEEN APPROVED BY THE ENGINEER PERIMETER EROSION CONTROL MEASURES (IE. SILT FENCE, WATTLES, AND INLET PROTECTION) MAY BE PULLED.



NORTH

GRAPHICAL SCALE (FEET)

0 1" = 30' 60'

LEGEND

- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- STORM STORM CATCH BASIN (ROUND CASTING)
- STORM SEWER CATCH BASIN (RECTANGULAR CASTING)
- PROPOSED CONTOUR
- HYDROSEED (PER MANUFACTURER SPECIFICATIONS)
- EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S75 OR EQUAL)
- DIRECTION OF SURFACE FLOW
- OVERFLOW RELIEF ROUTING
- SILT FENCE
- INLET PROTECTION
- CONSTRUCTION ENTRANCE / RIP RAP

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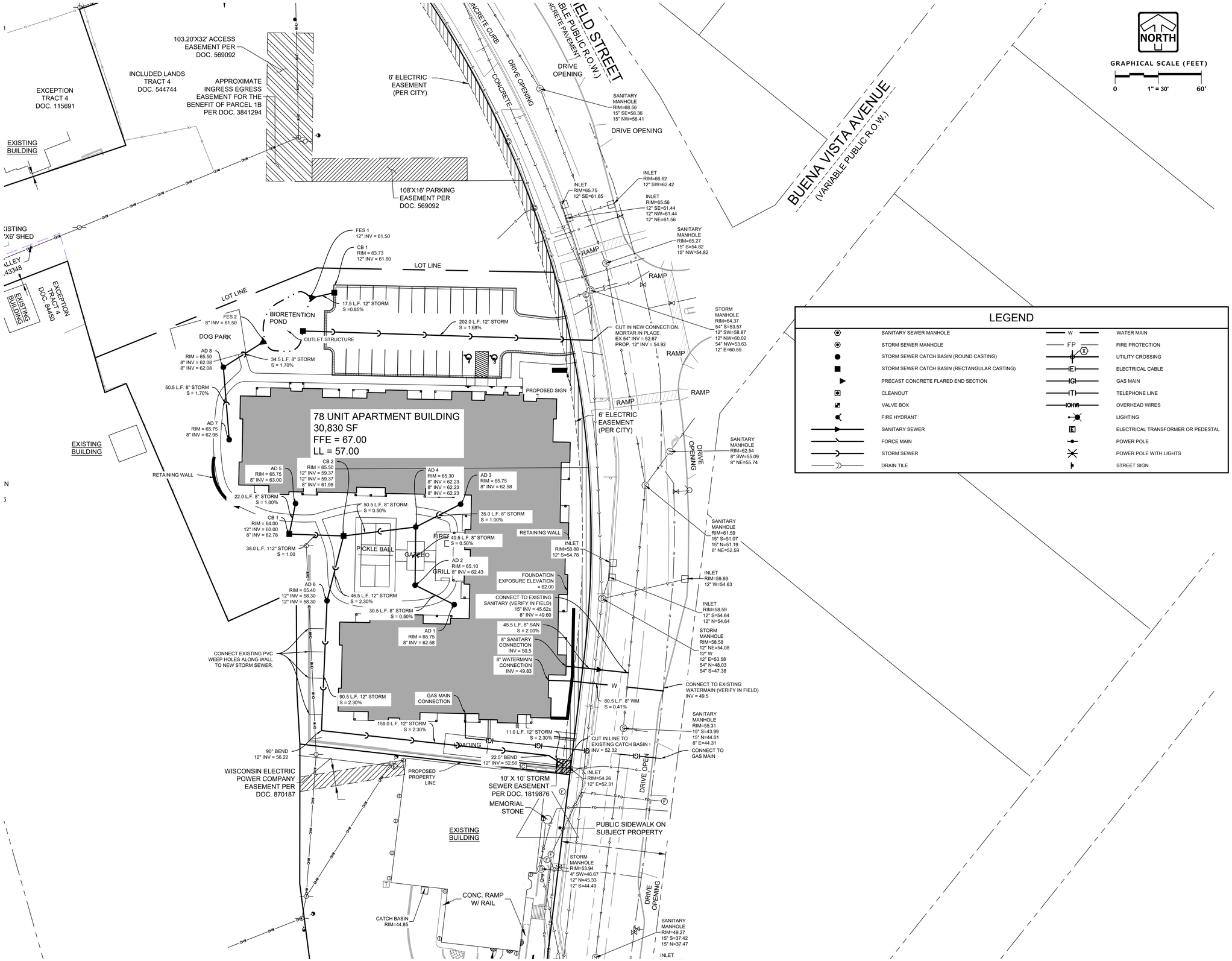
SPRINGHOUSE
WAUKESHA

200 Delafield St.
Waukesha, WI

SHEET TITLE
GRADING & EROSION CONTROL PLAN

SHEET NUMBER
C-2

PROJECT NO.



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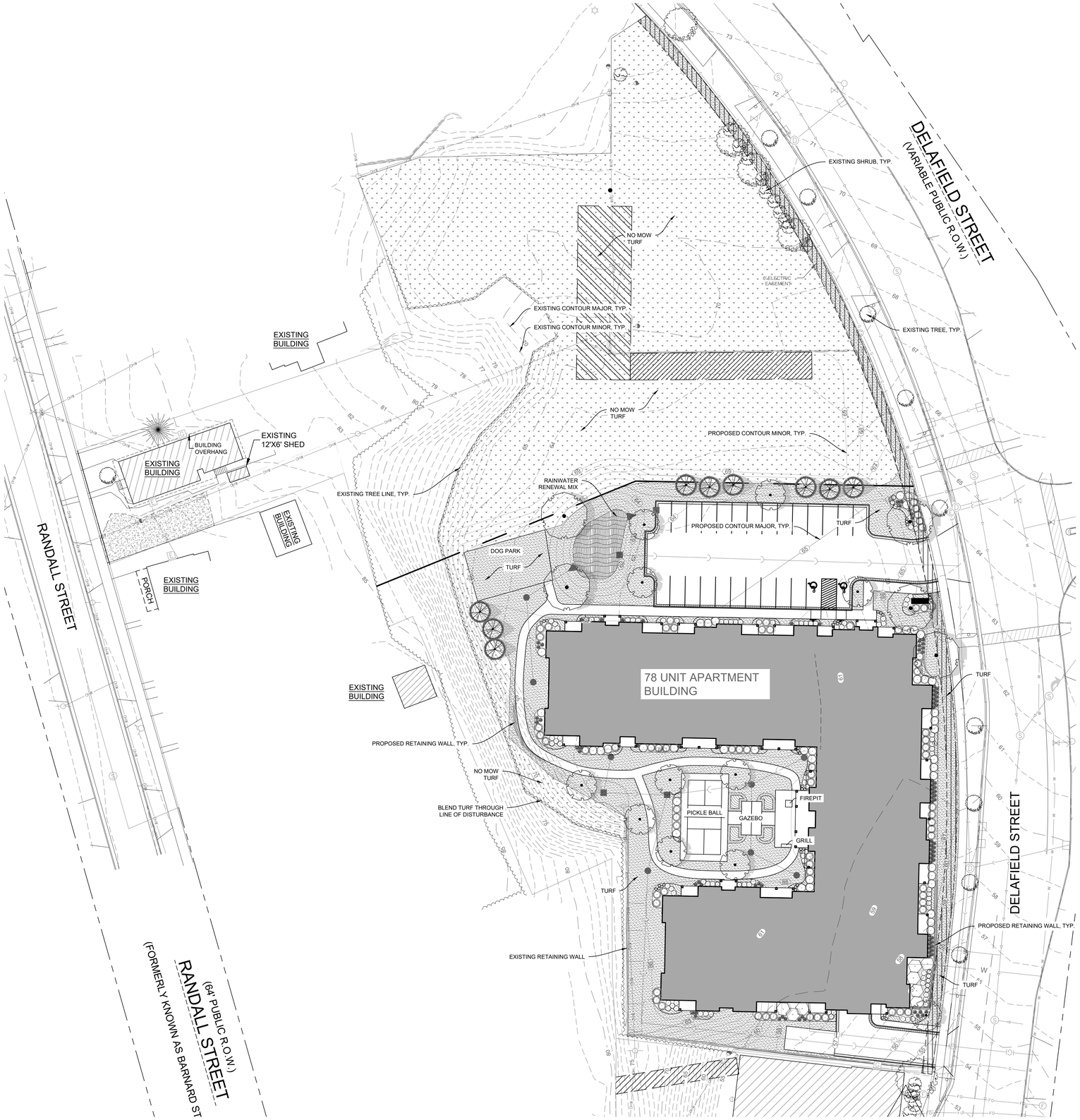
SPRINGHOUSE
WAUKESHA

200 Delafield St.
Waukesha, WI

SHEET TITLE
UTILITY PLAN

SHEET NUMBER
C-3

PROJECT NO.



CONCEPT PLANT SCHEDULE

	DECIDUOUS TREE	5
	Acer freemanii `Autumn Fantasy` / Autumn Fantasy Maple	
	Ginkgo biloba / Maidenhair Tree	
	Gleditsia triacanthos i `Shademaster` / Shademaster Locust	
	Gymnocladus dioica / Kentucky Coffee Tree	
	Quercus x schuetti / Swamp Bur Oak	
	Tilia tomentosa `Sterling` / Sterling Silver Linden	
	ORNAMENTAL TREE	11
	Amelanchier x grandiflora `Autumn Brilliance` / `Autumn Brilliance` Serviceberry	
	Malus x `Adirondak` / Adirondak Crab Apple	
	Malus x `Royal Raindrops` / Royal Raindrops Crabapple	
	Syringa reticulata `Ivory Silk` / Ivory Silk Japanese Tree Lilac	
	EVERGREEN TREE	9
	Abies concolor / White Fir	
	Picea glauca `Densata` / Black Hills Spruce	
	Picea omorika / Serbian Spruce	
	Pinus strobus / White Pine	
	LARGE DECIDUOUS SHRUB	8
	Aronia arbutifolia `Brilliantissima` / Brilliant Red Chokeberry	
	Physocarpus opulifolius / Ninebark	
	Viburnum carlesii / Korean Spice Viburnum	
	Viburnum dentatum `Blue Muffin` / Southern Arrowwood	
	MEDIUM EVERGREEN SHRUB	70
	Juniperus chinensis `Kallays Compact` / Kallay Compact Pfitzer Juniper	
	Juniperus chinensis `Old Gold` / Old Gold Juniper	
	Juniperus chinensis `Pfitzeriana Glauca` / Blue Pfitzer Juniper	
	Juniperus chinensis `Sea Green` / Sea Green Juniper	
	Picea abies `Pumila` / Dwarf Globe Spruce	
	Pinus mugo pumilio / Dwarf Mugo Pine	
	Taxus x media `Densiformis` / Dense Yew	
	Taxus x media `Tauntonii` / Tauton Yew	
	MEDIUM DECIDUOUS SHRUB	41
	Aronia melanocarpa `Morton` / Iroquis Beauty Black Chokeberry	
	Cornus stolonifera `Arctic Fire` / Arctic Fire Dogwood	
	Diervilla lonicera / Dwarf Bush Honeysuckle	
	Hydrangea arborescens `Annabelle` / Annabelle Smooth Hydrangea	
	Hydrangea paniculata `Vanilla Strawberry` / Vanilla Strawberry Hydrangea	
	Rosa rugosa `Blanc de Coubert` / Blanc de Coubert Rugosa Rose	
	Sambucus nigra `Black Lace` / Black Lace Elderberry	
	Spiraea x bumalda `Anthony Waterer` / Anthony Waterer Spiraea	
	Syringa meyeri `Palibin` / Dwarf Korean Lilac	
	Weigela florida `Dark Horse` / Weigela	
	SMALL DECIDUOUS SHRUB	85
	Aronia melanocarpa`Low Scape Mound` / Low Scape Mound Chokeberry	
	Hydrangea paniculata `Bobo` / Bobo Hydrangea	
	Hydrangea serrata `Tuff Stuff` / Tuff Stuff Hydrangea	
	Rosa x `Radtko` / Double Knock Out Rose	
	Spiraea betulifolia `Tor` / Birchleaf Spirea	
	Spiraea japonica `Magic Carpet` / Magic Carpet Spirea	
	SMALL EVERGREEN SHRUB	10
	Pinus mugo `Slowmound` / Mugo Pine	
	Taxus x media `Everlow` / Yew	
	TALL ORNAMENTAL GRASS	96
	Calamagrostis x acutiflora `Karl Foerster` / Feather Reed Grass	
	Calamagrostis x acutiflora `Overdam` / Overdam Feather Reed Grass	
	Miscanthus sinensis `Oktoberfest` / Oktoberfest Miscanthus	
	Panicum virgatum `Northwind` / Switch Grass	
	SHORT ORNAMENTAL GRASS	37
	Pennisetum alopecuroides `Hameln` / Hameln Dwarf Fountain Grass	
	Schizachyrium scoparium `Blue Heaven` / Blue Heaven Little Bluestem	
	Sporobolus heterolepis / Prairie Dropseed	
	PERENNIALS	711 sf
	Astilbe chinensis `Visions` / Visions Astilbe	23
	Calamintha nepeta `Blue Cloud` / Lesser Calamint	2,127
	Coreopsis verticillata `Zagreb` / Zagreb Thread Leaf Coreopsis	1,861
	Echinacea purpurea `Magnus Superior` / Magnus Superior Coneflower	23
	Geranium x cantabrigiense `Biokovo Carmina` / Biokovo Carmina Cranesbill	13
	Geum x `Mai Tai` / Mai Tai Grecian Rose	38
	Hemerocallis x `Pardon Me` / Pardon Me Daylily	23
	Hemerocallis x `Stella de Oro` / Stella de Oro Daylily	13
	Hosta x `Sum and Substance` / Plantain Lily	532
	Leucanthemum x superbum `Becky` / Shasta Daisy	6
	Nepeta x faassenii `Novanepjun` / Junior Walker Catmint	13
	Rudbeckia fulgida speciosa `Viette`s Little Suzy` / Coneflower	23
	Salvia nemorosa `May Night` / May Night Sage	13
	Sedum x `Autumn Joy` / Autumn Joy Sedum	9
	HEDGE ROW	211 sf
	Berberis thunbergii `Admiration` / Admiration Barberry	
	RAINWATER RENEWAL MIX	963 sf
	Rain Garden / Rainwater Perennial Mix	
	TURF	21,907 sf
	Sod / Sod	
	Turf Hydroseed / Drought Tolerant Fescue Blend	
	NO MOW TURF	53,556 sf
	Turf Hydroseed Low Grow / Low Grow Mix	

NORTH

GRAPHICAL SCALE (FEET)

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WAUKESHA

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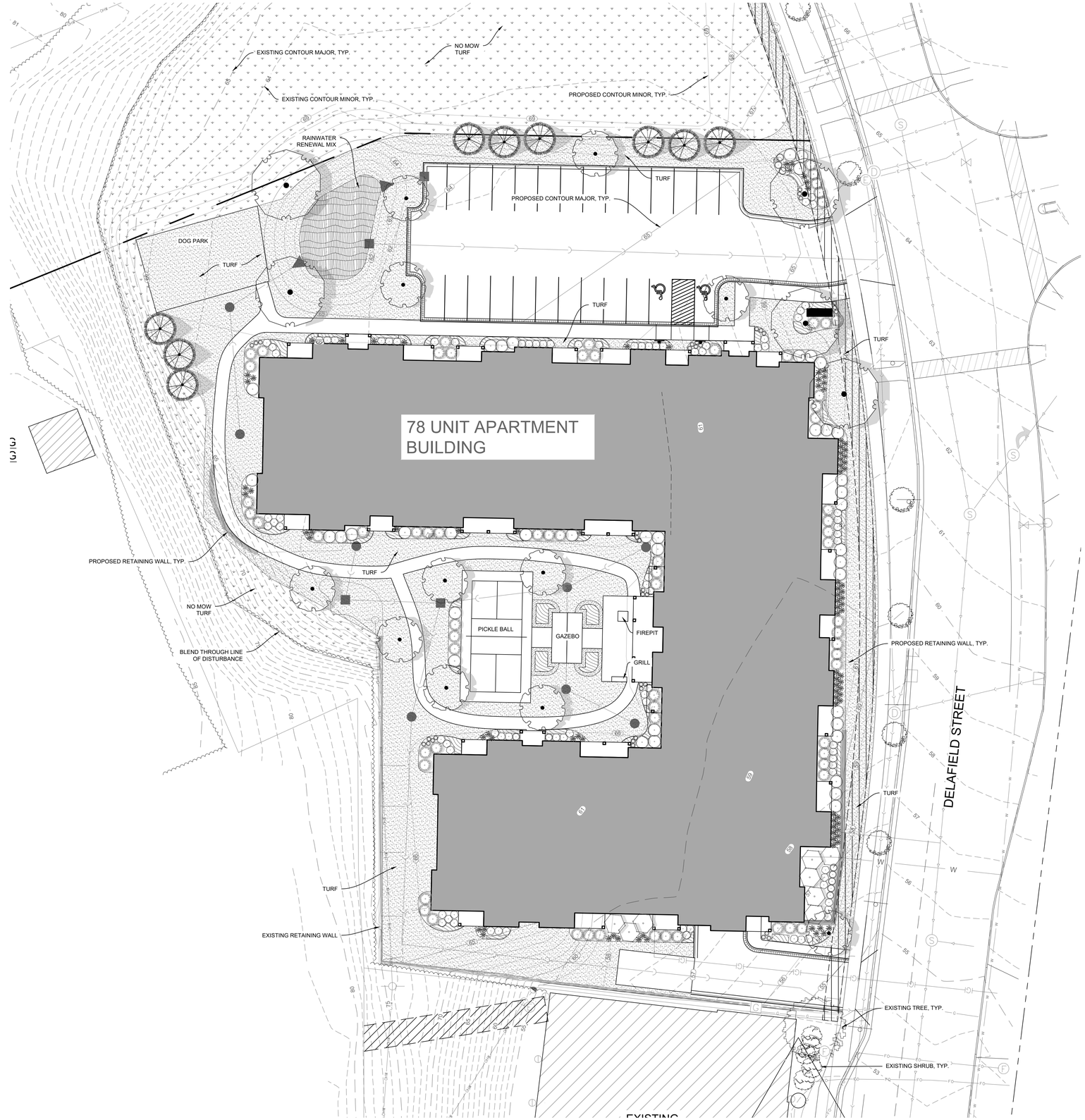
SHEET TITLE
LANDSCAPE OVERVIEW PLAN

SHEET NUMBER
L-1

PROJECT NO.



CONCEPT PLANT KEY

DECIDUOUS TREE
Acer freemanii `Autumn Fantasy` / Autumn Fantasy Maple
Ginkgo biloba / Maidenhair Tree
Gleditsia triacanthos i `Shademaster` / Shademaster Locust
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Quercus x schuetti / Swamp Bur Oak
Tilia tomentosa `Sterling` / Sterling Silver Linden

ORNAMENTAL TREE
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Malus x `Adirondak` / Adirondak Crab Apple
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EVERGREEN TREE
Abies concolor / White Fir
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MEDIUM EVERGREEN SHRUB
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Juniperus chinensis `Old Gold` / Old Gold Juniper
Juniperus chinensis `Pfitzeriana Glauca` / Blue Pfitzer Juniper
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Syringa meyeri `Palibin` / Dwarf Korean Lilac
Weigela florida `Dark Horse` / Weigela

SMALL DECIDUOUS SHRUB
Aronia melanocarpa`Low Scape Mound` / Low Scape Mound Chokeberry
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Hydrangea serrata `Tuff Stuff` / Tuff Stuff Hydrangea
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Spiraea betulifolia `Tor` / Birchleaf Spirea
Spiraea japonica `Magic Carpet` / Magic Carpet Spirea

SMALL EVERGREEN SHRUB
Pinus mugo `Slowmound` / Mugo Pine
Taxus x media `Everlow` / Yew

TALL ORNAMENTAL GRASS
Calamagrostis x acutiflora `Karl Foerster` / Feather Reed Grass
Calamagrostis x acutiflora `Overdam` / Overdam Feather Reed Grass
Miscanthus sinensis `Oktoberfest` / Oktoberfest Miscanthus
Panicum virgatum `Northwind` / Switch Grass

SHORT ORNAMENTAL GRASS
Pennisetum alopecuroides `Hameln` / Hameln Dwarf Fountain Grass
Schizachyrium scoparium `Blue Heaven` / Blue Heaven Little Bluestem
Sporobolus heterolepis / Prairie Dropseed

PERENNIALS
Astilbe chinensis `Visions` / Visions Astilbe
Calamintha nepeta `Blue Cloud` / Lesser Calamint
Coreopsis verticillata `Zagreb` / Zagreb Thread Leaf Coreopsis
Echinacea purpurea `Magnus Superior` / Magnus Superior Coneflower
Geranium x cantabrigiense `Biokovo Carmina` / Biokovo Carmina Cranesbill
Geum x `Mai Tai` / Mai Tai Grecian Rose
Hemerocallis x `Pardon Me` / Pardon Me Daylily
Hemerocallis x `Stella de Oro` / Stella de Oro Daylily
Hosta x `Sum and Substance` / Plantain Lily
Leucanthemum x superbum `Becky` / Shasta Daisy
Nepeta x faassenii `Novanepjun` / Junior Walker Catmint
Rudbeckia fulgida speciosa `Viette`s Little Suzy` / Coneflower
Salvia nemorosa `May Night` / May Night Sage
Sedum x `Autumn Joy` / Autumn Joy Sedum

HEDGE ROW
Berberis thunbergii `Admiration` / Admiration Barberry

RAINWATER RENEWAL MIX
Rain Garden / Rainwater Perennial Mix

TURF
Turf/Sod

NO MOW TURF
Turf Hydroseed Low Grow / Low Grow Mix

NORTH

GRAPHICAL SCALE (FEET)
0 1" = 20' 40'

kba
knothe • bruce
ARCHITECTS
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7601 University Ave, Ste 201
Middleton, WI 53562

ISSUED
Issued for xyz – Month Day, Year

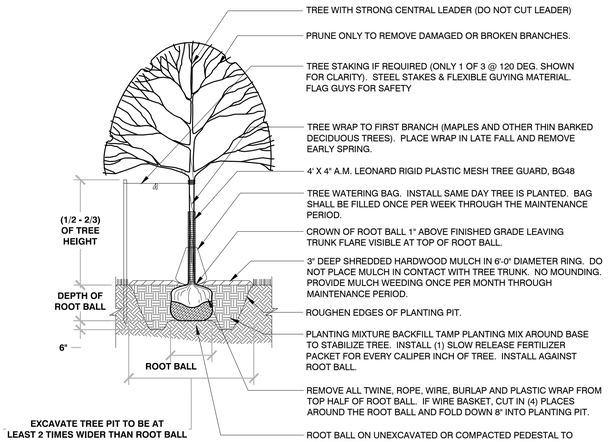
SPRINGHOUSE
WAUKESHA

200 Delafield St.
Waukesha, WI

SHEET TITLE
LANDSCAPE PLANTING PLAN

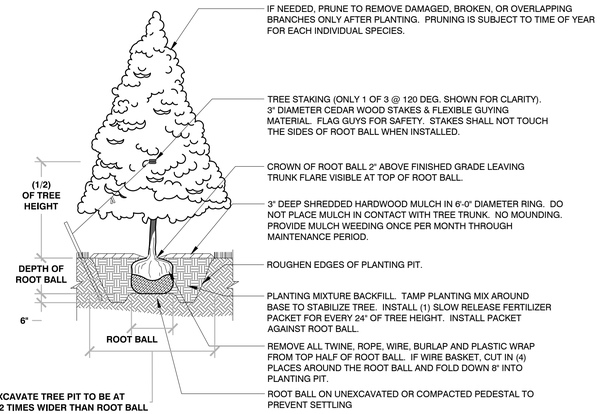
SHEET NUMBER
L-2

PROJECT NO.



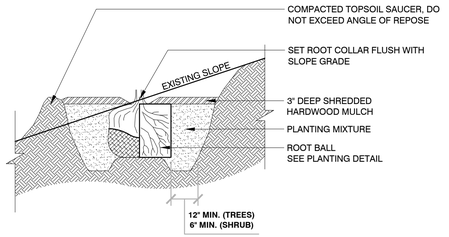
1 TREE PLANTING

1/4" = 1'-0" 329343-01



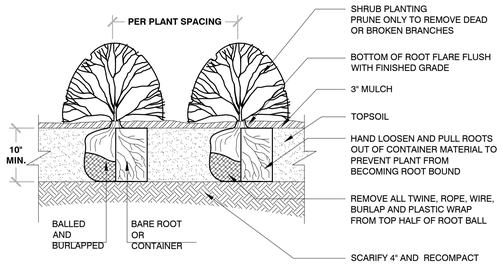
2 EVERGREEN TREE PLANTING

1/4" = 1'-0" 329343-03



3 TREE PLANTING ON SLOPE

3/8" = 1'-0" 329343-02

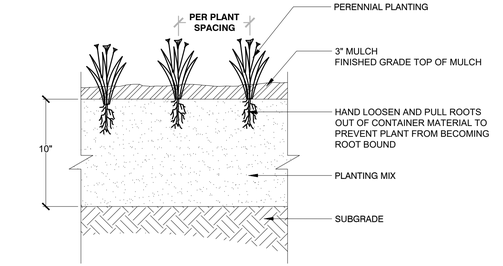


BAREROOT PLANTING NOTES:

1. SOAK ROOTS IN WATER FOR AT LEAST ONE HOUR BUT NOT MORE THAN 24 HOURS PRIOR TO PLANTING.
2. SCARIFY SIDES AND BOTTOMS OF HOLE.
3. PROCEED WITH CORRECTIVE PRUNING OF THE TOP AND BOTTOM ROOTS.
4. TRANSFER PLANT DIRECTLY FROM WATER TO HOLE. SET PLANT SO THE ROOT FLARE IS APPROXIMATELY AT THE FINISHED SOIL ELEVATION. SPREAD ROOTS OUT EVENLY. PLUMB AND IMMEDIATELY BACKFILL WITH PLANTING SOIL MIX.
5. WATER THOROUGHLY WITHIN 2 HOURS TO SETTLE PLANTS AND FILL VOIDS.
6. BACKFILL VOIDS AND WATER SECOND TIME.
7. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING UNLESS SOIL MOISTURE IS EXCESSIVE.

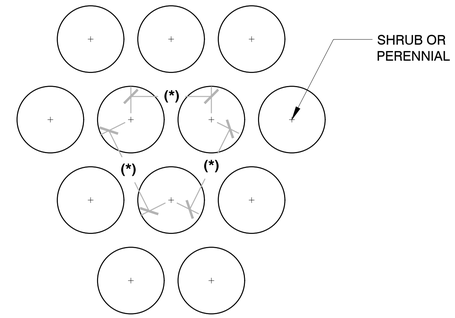
4 SHRUB PLANTING

1/2" = 1'-0" 329333-02



5 PERENNIAL PLANTING

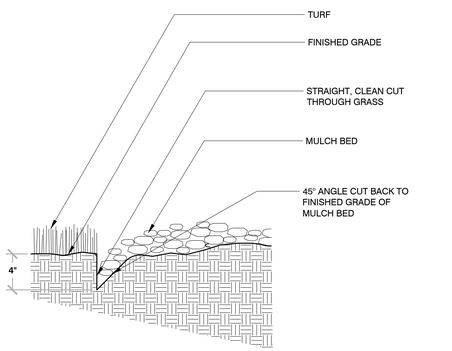
1" = 1'-0" 3293-01



(*) = SPECIFIED PLANT SPACING PER PLANTING LIST

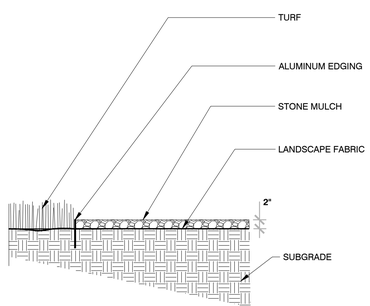
6 PLANT SPACING

3/4" = 1'-0" 3293-02



7 TRENCHED BED EDGE

3/4" = 1'-0" 3293-03



8 STONE MULCH ALONG TURF

3/4" = 1'-0" 329413-04

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ISSUED
Issued for xyz – Month Day, Year

SPRINGHOUSE
WAUKESHA

200 Delafield St.
Waukesha, WI

SHEET TITLE
LANDSCAPE DETAILS

SHEET NUMBER
L-3

PROJECT NO.

GENERAL PLANTING NOTES

1. THE LAYOUT OF ALL PLANTING BEDS AND INDIVIDUAL TREES AND SHRUBS SHALL BE STAKED BY THE CONTRACTOR IN ADVANCE OF INSTALLATION. FLAGGING, STAKES, OR PAINT MAY BE USED TO DELINEATE LOCATIONS AS SCALED FROM THE PLANS. AN APPROVED REPRESENTATIVE WILL REVIEW THESE LOCATIONS WITH THE CONTRACTOR AND MAKE MINOR ADJUSTMENTS AS NECESSARY. BED LAYOUT SHALL ALSO INCLUDE PERENNIAL GROUPINGS BY SPECIES.
2. THE CONTRACTOR IS RESPONSIBLE FOR INDEPENDENTLY DETERMINING THE PLANT MATERIAL QUANTITIES REQUIRED BY THE LANDSCAPE PLANS. REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT.
3. NO PLANT MATERIAL OR PLANT SIZE SUBSTITUTIONS WILL BE ACCEPTED UNLESS APPROVAL BY THE LANDSCAPE ARCHITECT. ANY CHANGES SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT IN WRITING PRIOR TO INSTALLATION.
4. ALL BNB STOCK SHALL BE NURSERY GROWN IN A CLAY LOAM SOIL FOR A MINIMUM OF THREE GROWING SEASONS WITHIN 200 MILES OF PROJECT LOCATION, IN A ZONE COMPATIBLE WITH USDA HARDINESS ZONE 5A. SEED SHALL BE PROVIDED FROM A NURSERY (WITHIN 200 MILES) WITH A SIMILAR PLANT HARDINESS ZONE AS PROJECT LOCATION. EXISTING SOIL SHALL BE AMENDED PER SOIL ANALYSIS REPORT TO ENSURE A PROPER GROWING MEDIUM IS ACHIEVED.
5. ALL PLANT MATERIAL SHALL COMPLY WITH STANDARDS DESCRIBED IN AMERICAN STANDARD OF NURSERY STOCK - Z60.1 ANSI. LANDSCAPE ARCHITECT OR OWNERS AUTHORIZED REPRESENTATIVE RESERVES THE RIGHT TO INSPECT AND POTENTIALLY REJECT ANY PLANT MATERIAL DEEMED TO NOT MEET THE REQUIRED STANDARDS.
6. ALL STOCK SHALL BE FREE OF DISEASES AND HARMFUL INSECTS, DAMAGE, DISORDERS AND DEFORMITIES.
7. TREES SHALL HAVE SINGLE, STRAIGHT TRUNKS AND WELL BALANCED BRANCH SYSTEMS. HEIGHT-TO-CALIPER RATIOS SHALL BE CONSISTENT WITH THE LATEST EDITION OF ANSI Z60.1.
8. ROOT SYSTEMS SHALL BE LARGE ENOUGH TO ALLOW FOR FULL RECOVERY OF THE TREE, AND SHALL CONFORM TO STANDARDS AS THEY APPEAR IN THE MOST CURRENT REVISION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S AMERICAN STANDARD OF NURSERY STOCK ANSI Z60.1.
9. BNB TREES SHALL BE DUG WITH A BALL OF SOIL, NOT SOFT BALLED OR POTTED AND SHALL BE FIRM IN THEIR ROOTBALL. ROOT BALL SHALL BE WRAPPED (WITH BIODEGRADABLE MATERIAL). THE TREE ROOT FLARE, OR COLLAR, SHALL BE AT OR WITHIN THE TOP THREE INCHES OF GRADE.
10. ALL SPRING TREES MUST BE FRESHLY DUG IN THE SPRING OF 2020.
11. ALL AUTUMN TREES MUST BE FRESHLY DUG IN THE AUTUMN OF 2019.
12. TREES SHALL BE ALIVE, HEALTHY AND APPROPRIATELY MOIST, AT TIME OF DELIVERY.
13. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH PLANTING DETAILS.
14. ALL PLANTING BEDS SHALL HAVE A MINIMUM 10" DEPTH OF PREPARED SOIL. WITH APPROVAL, EXISTING SOIL MAY BE UTILIZED PROVIDED THE PROPER SOIL AMENDMENTS ARE TILLED THOROUGHLY INTO THE TOP 10" OF SOIL. REFER TO SOIL PLACEMENT NOTES.
15. WHILE PLANTING TREES AND SHRUBS, BACKFILL ⅔ OF PLANTING HOLE AND WATER TREE THOROUGHLY BEFORE INSTALLING THE REMAINDER OF SOIL MIXTURE. AFTER ALL SOIL HAS BEEN PLACED INTO THE PLANTING HOLE WATER THOROUGHLY AGAIN.
16. THE CONTRACTOR MUST LABEL ALL TREES WITH THE COMMON AND BOTANICAL NAMES PRIOR TO FINAL INSPECTION.
17. OAK TREES SHALL BE TREATED FOR TWO-LINE CHESTNUT BORER BOTH AT THE TIME OF INSTALLATION AND DURING THE SECOND GROWING SEASON.
18. ALL TREES PLANTED IN TURF AREAS SHALL RECEIVE A 3" DEEP SHREDDED HARDWOOD MULCHED RING AS SHOWN IN PLANTING DETAILS.
19. ALL PLANTING BEDS SHALL RECEIVE 18" OF NEW TOPSOIL OVER TOP OF EXISTING ROUGH GRADED SOIL
20. ALL PLANTING BEDS SHALL RECEIVE LANDSCAPE FABRIC WITH 3" DEEP ALPINE STONE MULCH. REFER TO DETAILS (L-4). CONTRACTOR TO PROVIDE LANDSCAPE FABRIC AND MULCH SPECIFICATIONS TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION. LANDSCAPE FABRIC SHALL BE INSTALLED TO COVER THE ENTIRE AREA TO RECEIVE STONE MULCH WITH EACH SEAM OVERLAPPING A MINIMUM OF 6".
21. ALL PLANTING BEDS AND TREE RINGS SHALL HAVE A PERMANENT EDGE CREATED BY COMMERCIAL GRADE EDGING OR CONCRETE PAVING OR CURBING.
22. ALL TURF SEED AREAS SHALL RECEIVE A MINIMUM OF 3" DEPTH OF TOPSOIL. WITH APPROVAL, EXISTING SOIL MAY BE UTILIZED PROVIDED THE PROPER SOIL AMENDMENTS ARE TILLED THOROUGHLY INTO THE TOP 6" OF SOIL AS INDICATED IN THE SOIL PLACEMENT NOTES. REQUIRED AMENDMENTS SHALL BE DETERMINED BASED ON A SOIL ANALYSIS TO BE PERFORMED. ALL TOPSOIL AMENDMENT SHALL BE AGED WEED FREE MANURE OR CLASS 1 ORGANIC MATTER.
23. ALL SODDED AREAS SHALL RECEIVE A MINIMUM OF 2" DEPTH OF TOPSOIL. WITH APPROVAL, EXISTING SOIL MAY BE UTILIZED PROVIDED THE PROPER SOIL AMENDMENTS ARE TILLED THOROUGHLY INTO THE TOP 6" OF SOIL AS INDICATED IN THE SOIL PLACEMENT NOTES. APPLY A 10-10-10 STARTER FERTILIZER UNIFORMLY AT RECOMMENDED RATES PRIOR TO INSTALLATION OF SOD. INSTALL SOD UNIFORMLY WITH STAGGERED JOINTS, LAID TIGHTLY END TO END AND SIDE TO SIDE. ROLL SOD WITH A WALK BEHIND ROLLER AND WATER IMMEDIATELY TO A DEPTH OF 3". SOD INSTALLED IN SWALES AND ON SLOPES EXCEEDING 1:3 SHALL BE STAKED. CONTRACTOR IS RESPONSIBLE TO PROVIDE A SMOOTH, UNIFORM, HEALTHY LAWN. CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIRST 2 MOWINGS AND WATERING DURING THIS ESTABLISHMENT PERIOD.
24. FOR LAWN SEEDING, APPLY A STARTER FERTILIZER AND SEED UNIFORMLY AT THE RATE RECOMMENDED BY MANUFACTURER, AND PROVIDE A MULCH COVERING THAT IS SUITABLE TO PROMOTE SEED GERMINATION AND TURF ESTABLISHMENT. CONTRACTOR TO PROVIDE FERTILIZER, SEED, AND MULCH SPECIFICATIONS TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION. EROSION CONTROL MEASURES ARE TO BE INSTALLED IN THOSE AREAS REQUIRING STABILIZATION (SWALES, SLOPES EXCEEDING 1:3, AND THOSE LOCATIONS INDICATED IN CIVIL DRAWINGS).
25. THE CONTRACTOR TO ENSURE A SMOOTH, UNIFORM QUALITY TURF IS ACHIEVED WITH NO BARE SPOTS LARGER THAN 6" X 6". ANY BARE SPOTS LARGER THAN 6" X6" AT THE END OF ESTABLISHMENT PERIOD SHALL BE RESEEDED AT THE CONTRACTORS EXPENSE TO OBTAIN A DENSE, UNIFORM LAWN.
26. ALL FINISH GRADING AND LAWN AREAS TO BE INSTALLED BY LANDSCAPE CONTRACTOR.
27. ALL DISTURBED AREAS WITHIN THE PROJECT SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
28. ALL DISTURBED AREAS OUTSIDE THE LIMITS OF WORK SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE OWNER.
29. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, INCLUDING ANY IRRIGATION LINES, PRIOR TO DIGGING. CONSULT DIGGERS HOTLINE.
30. THE CONTRACTOR SHALL ENSURE THAT SOIL CONDITIONS AND COMPACTION ARE ADEQUATE TO ALLOW FOR PROPER DRAINAGE AROUND THE CONSTRUCTION SITE. UNDESIRABLE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING OF WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE PROPER SURFACE AND SUBSURFACE DRAINAGE IN ALL AREAS
31. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, FEES, AND LICENSES NECESSARY FOR THE INSTALLATION OF THIS PLAN.
32. THE CONTRACTOR IS TO REVIEW ALL SITE ENGINEERING DOCUMENTS PRIOR TO INSTALLATION. ANY CONFLICTS MUST BE REPORTED TO THE LANDSCAPE ARCHITECT. THESE LANDSCAPE DRAWINGS ARE FOR THE INSTALLATION OF PLANT MATERIALS ONLY UNLESS OTHERWISE STATED.
33. THE CONTRACTOR SHALL PROVIDE WATERING AND MAINTENANCE SERVICES FOR A PERIOD OF 60 DAYS TO ENSURE VEGETATIVE ESTABLISHMENT. UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL SUPPLY THE OWNER IN WRITING WITH ONGOING WATERING AND MAINTENANCE INSTRUCTIONS.
34. PLANT MATERIALS SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM TIME OF OWNER ACCEPTANCE. ONLY ONE REPLACEMENT PER PLANT WILL BE REQUIRED DURING THE WARRANTY PERIOD EXCEPT IN THE EVENT OF FAILURE TO COMPLY WITH THE SPECIFIED REQUIREMENTS.
35. THE CONTRACTOR IS RESPONSIBLE TO CONDUCT A FINAL WALK THROUGH WITH THE LANDSCAPE ARCHITECT AND OR OWNERS REPRESENTATIVE TO ANSWER QUESTIONS, PROVIDE INSTRUCTIONS, AND ENSURE THAT PROJECT REQUIREMENTS HAVE BEEN MET.

SOIL PLACEMENT NOTES

1. LOOSEN SUBGRADE TO A MINIMUM DEPTH INDICATED IN PLANTING NOTES USING A CULTI-MULCHER OR SIMILAR EQUIPMENT, AND REMOVE STONES MEASURING OVER 1-1/2 INCHES IN ANY DIMENSION, STICKS, RUBBISH AND OTHER EXTRANEOUS MATTER. INTERNAL PARKING ISLANDS SHALL BE LOOSENED TO A DEPTH OF 30".
2. THOROUGHLY BLEND PLANTING SOIL MIX FOR PLANTING BED AREAS. (1 PART EXISTING SOIL, 1 PART TOPSOIL, 1 PART ORGANIC SOIL AMENDMENT, 2.9 POUNDS PER CUBIC YARD OF 4-4-4 ANALYSIS SLOW-RELEASE FERTILIZER)
3. TREE AND SHRUB HOLES SHALL BE FILLED WITH A PREPARED PLANTING MIXTURE OF 1 PART TOPSOIL, 2 PARTS PLANTING SOIL MIX.
4. SPREAD SOIL AND SOIL AMENDMENTS TO DEPTH INDICATED ON DRAWINGS, BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLEMENT. (FINISH GRADE OF PLANTING BEDS SHALL BE 3" BELOW ALL ADJACENT SURFACES. FINISH GRADE OF TURF SEEDING AREAS SHALL BE 1" BELOW ALL ADJACENT HARD SURFACES, WALKS, AND CURBS.)
5. PLACE APPROXIMATELY 1/2 OF TOTAL AMOUNT OF SOIL REQUIRED. WORK INTO TOP OF LOOSENED SUBGRADE TO CREATE A TRANSITION LAYER, THEN PLACE REMAINDER OF THE SOIL. SOIL TRANSITION LAYER SHALL BE TILLED TO A MINIMUM DEPTH OF 6" BELOW THE DEPTH OF NEWLY PLACED SOIL. PARKING LOT ISLANDS SHALL BE CROWNED TO A HEIGHT OF 6" TO PROVIDE PROPER DRAINAGE UNLESS OTHERWISE NOTED.
6. DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
7. FINISH GRADING: GRADE SOIL TO A SMOOTH, UNIFORM SURFACE PLANE WITH A LOOSE, UNIFORMLY FINE TEXTURE.
8. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES.
9. RESTORE PLANTING BEDS IF ERODED OR OTHERWISE DISTURBED AFTER FINISH GRADING AND BEFORE PLANTING.

Rain Garden Plugs Installation

Installation of plugs should occur on a cloudy, cool day in either the morning or afternoon. Planting should also occur as early in the season as possible once the risk of freezing has passed.

A. Preparation of Soil Prior to Planting

1. Incorporate soil additives consisting of two inches of compost mixed into two inches of topsoil. the soil mix should be incorporated into the soil using a rotary device with capability of reaching to 12" below the surface. Compost shall meet WDNR specification S100 - Compost.
2. All foreign materials larger than 1-inch shall be removed from the soil prior to seeding or planting.
3. Area should be free from unsightly variations, ridges, and depressions.
4. Avoid driving over the specified area with machinery.

B. Plant Plug Installation

If installing plugs in combination with seeding, install plugs after seed has been placed. Install plugs prior to placement of straw mulch except where an erosion control blanket will be utilized. Ensure that newly planted plugs have adequate straw mulch coverage following installation.

1. Dig a hole in your freshly worked soil about twice the diameter and the same height of the root ball of the plant. Put the soil aside to fill the hole back in later. Gently remove the plant from its container, and brush your hand over the root ball to stimulate the roots.
2. Place the plant in the hole. Place the roots at the proper level so that the plants roots aren't exposed and the foliage of low-lying plants doesn't get too wet. Fill the hole about half-way with the original soil. Gently pack the soil to remove any trapped air. Water plant thoroughly.
3. Finish filling in with soil around the plant, gently pack, and water thoroughly again.
4. Cover the base of the plant with 1" of straw mulch.
5. After planting, keep your plants well watered for the first year until they establish a good root system.

Weed Suppression Measures:

First Year - Perform spot spray with herbicide to suppress weeds. This should occur approximately every month of the growing season after infiltration basins have been rough graded.
Second Year - In May/June mow basins at 6-inch height to suppress weeds. Perform spot spray with herbicide to suppress weeds. Have qualified professional assess plantings. Repeat mowing basins and spot-spray in early July.
Third Year - In May/June mow basins at 6-inch height to suppress weeds. Perform spot spray with herbicide to suppress weeds.
Fourth Year - In May perform a prescribed burn. In June have qualified professional assess plantings.

knothe · bruce
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7601 University Ave, Ste 201
Middleton, WI 53562

ISSUED
Issued for xyz – Month Day, Year

SPRINGHOUSE
WAUKESHA

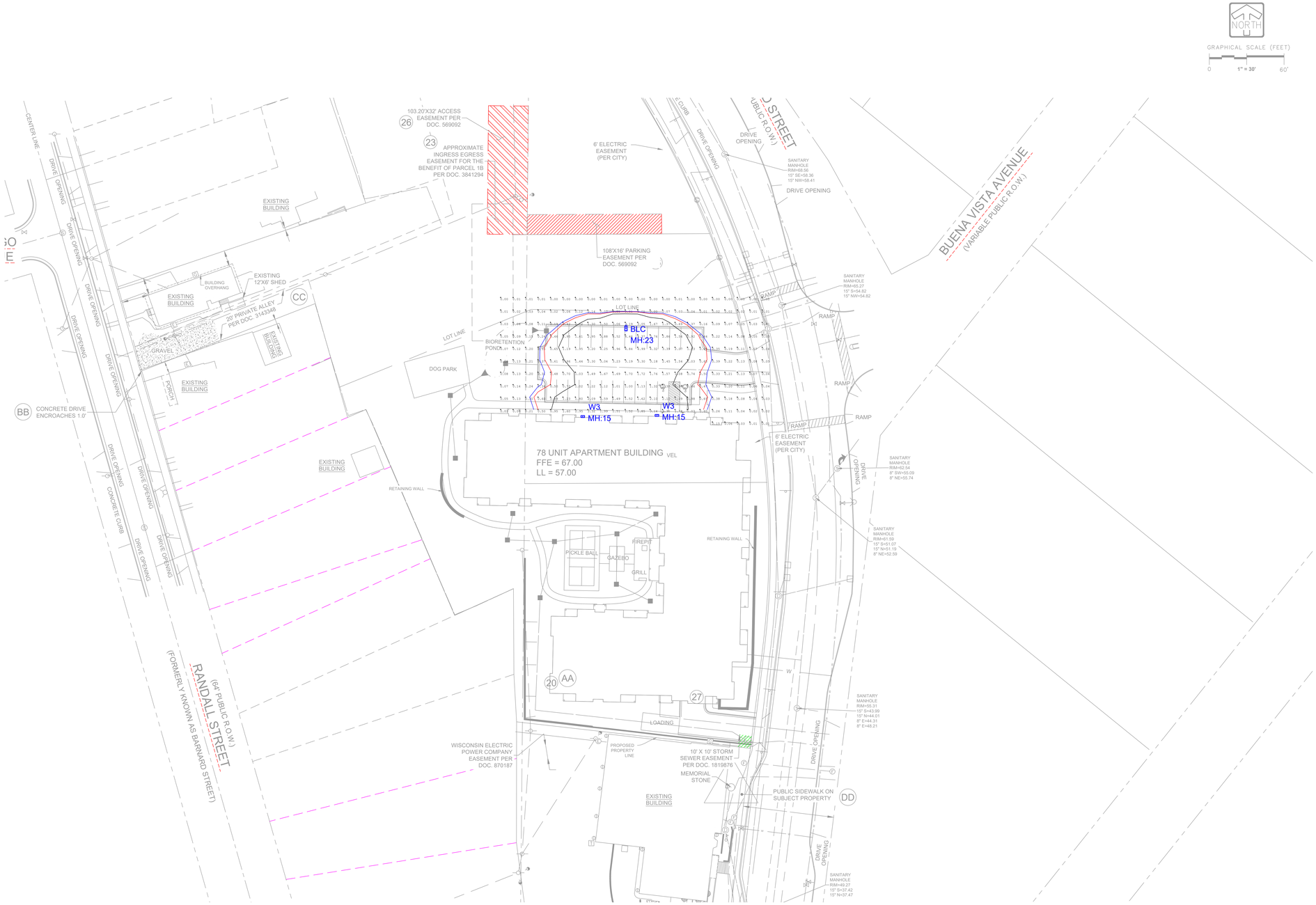
200 Delafield St.
Waukesha, WI

SHEET TITLE
LANDSCAPE GENERAL NOTES

SHEET NUMBER
L-4

PROJECT NO.

Luminaire Schedule				
QTY	**TYPE**	**MFR**	**PART NUMBER**	**LLF**
1	BLC	Acuity	DSX1 LED P6 40K BLC MVOLT SPA DDBXD + 20' SSS POLE + 3' BASE	0.950
2	W3	Acuity	WSR LED P3 xxK SR3 MVOLT (FINISH)	0.950



ENTERPRISE
Lighting & Control

#	DATE	COMMENTS

REVISIONS

DRAWN BY: JS

DATE: 3 / 30 / 2020

SCALE: 1" = 30'-0"

CITY VIEW APARTMENTS

WAUKESHA, WI

LED SITE LIGHTING PLAN

To: City of Waukesha – Department of Public Works

From: Aaron Koch

Date: 03/30/2020

Subject: Stormwater Management for Springhouse Waukesha Apartments

Spring View Apartments, located on the west side of Delafield Street across from Buena Vista Avenue, is a newly proposed apartment complex in the City of Waukesha. The proposed apartment complex includes a 78 unit apartment building with a parking lot to the north and a driveway to the south which will lead to underground parking. In order to address the stormwater requirements needed by both the City of Waukesha and The Wisconsin DNR, the development is proposing to install a bioretention pond in the northwest corner of the site. The proposed bioretention pond will be utilized to capture the water from the proposed north parking lot. The current site had recently housed a building and a parking lot, thus this site will be considered a redevelopment. This means according to the City of Waukesha's and the Wisconsin DNR's stormwater code that 40% of the total suspended solids must be reduced from newly created parking areas and roads created by the development. The proposed bioretention pond will be designed to reach this stormwater goal. The WinSLAMM modeling the bioretention pond would remove 41.1% of the TSS on-site.

With regards to peak flow control, according to Waukesha's stormwater code for redevelopment the calculated post-development peak storm water discharge rate shall not exceed the calculated pre-development discharge rates for the 1-year, 2-year, 10-year, and 100-year, 24-hour design storms. Since, the new development is not increasing the impervious area of the site, rather the new development will decrease the impervious area onsite, control for peak stormwater discharge will not be needed. According to the HydrCAD modeling the existing site has a 100-YR peak flow of 35.99 cfs while the proposed site has a reduced 100-YR peak flow of 34.82 cfs.

In conclusion, the proposed apartment development in the City of Waukesha will utilize a bioretention pond in the northwest corner of its site to handle the stormwater requirements required by both the City of Waukesha and the Wisconsin DNR. This pond will be designed and constructed in accordance with both the Wisconsin DNR's and City of Waukesha's standards. A final report will be generated detailing the calculations and basin functionality at a later date.

Attachment A - Application for Development Review Checklist

Project Name: Springhouse Waukesha

Engineering Design Firm: Pinnacle Engineering Group

Checklist Items	CSM	Preliminary Plat	Final Plat	Property Survey for Bldg Permit	Storm Water Plan	Erosion Control Plan	Site, Grading, Drainage Plan	Street Plan	Utility Plan	Landscape Plan	Traffic Control Plan	Traffic Impact Analysis	Conditional Use or Home Indus.	PUD or Developer's Ag.	Minor site or Arch. Change	Conditional Use	Rezoning & Comp. Plan Change
Followed Construction Drawing Sheet Layout standards in Development Handbook						X	X	N/A	X	X							
Followed Development Handbook and Storm Water Ordinance standards for Erosion control plans						X											
Obtained geotechnical evaluation for storm water and pavement design					N/A		N/A	N/A	N/A								
Followed Development Handbook standards, and Wisconsin Administrative Code for Property Survey				N/A													
Verified proposed basement floor elevation is at least 1 foot above the highest seasonal high water table elevation				N/A													
Followed Development Handbook standards and Ordinance for Preliminary Plat		N/A															
Followed Site, Grading, and Drainage Plan design standards in Development Handbook and Storm Water Ordinance							X						N/A		N/A	N/A	N/A
Followed Traffic impact analysis standards in Development Handbook												N/A					
Specifications conform to current City Standard Specifications					X	X	X	X	X	X	N/A			N/A			
Followed Lighting Plan standards in Development Handbook									X								
Development site contains Contaminated Waste							N/A										
Followed storm water management requirements in Development Handbook, and Ordinance					X												
Site contains mapped FEMA floodplain or a local 100-year storm event high water limits							N/A										
Site contains wetlands or Natural Resource limits (ie. Primary, Secondary, Isolated , shoreland limits)							N/A										
CSM follows standards in Development Handbook, City Ordinance, and State Statutes	N/A																
Followed Development Handbook standards for Street plans and profiles								N/A									
Followed Development Handbook standards for utility plans and profiles									N/A								
Existing sanitary sewer lateral has been televised							N/A		N/A				N/A		N/A	N/A	N/A

Checklist Items	CSM	Preliminary Plat	Final Plat	Property Survey for Bldg Permit	Storm Water Plan	Erosion Control Plan	Site, Grading, Drainage Plan	Street Plan	Utility Plan	Landscape Plan	Traffic Control Plan	Traffic Impact Analysis	Conditional Use or Home Indus.	PUD or Developer's Ag.	Minor site or Arch. Change	Conditional Use	Rezoning & Comp. Plan Change
Development Agreement needed for Public Infrastructure														N/A			
Followed Development Handbook standards for Landscape plans										X							
Followed Development Handbook standards, State Statures and Ordinance for Final Plat			N/A														
A-E 2.02(4): Each sheet of plans, drawings, documents, specifications and reports for architectural, landscape architectural, professional engineering, design or land surveying practice should be signed, sealed, and dated by the	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A
32.10(e)(12.)H. A cover sheet stamped and signed by a professional engineer registered in the State of Wisconsin indicating that all plans and supporting documentation have been reviewed and approved by the engineer and certifying that they have read					N/A												
City, DNR, County or State Permits are needed					N/A		N/A	N/A	N/A		N/A						
Complete and submit Plan Sheet and Submittal Specific checklists in Development Handbook	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A					
Proposed easements needed are shown.	N/A		N/A		N/A		X	N/A	X								
All Existing easements are shown	N/A	N/A	N/A	N/A	N/A	X	X	N/A	X	X			N/A	N/A	N/A	N/A	N/A

City of Waukesha
Department of Public Works
130 Delafield Street
Waukesha, WI 53188
Waukesha-wi.gov

Engineering Plan Checklist

Attachment B
(Rev 12/18)

Project Name: Springhouse Waukesha

Engineering & Design Firm: Pinnacle Engineering Group

General Information

Plans shall include the seal and signature of the Wisconsin licensed professional engineer responsible for the preparation of the construction plans on the cover sheet or on each sheet

YES	NO	N/A	
☐	☐	☒	Provide a copy of the WisDOT permit for any work in the State of Wisconsin right of way.
☐	☐	☒	Provide a copy of the Waukesha County Department of Public Works permit for any work in right of way of Waukesha County.
☐	☐	☒	Provide a copy of Wisconsin Department of Natural Resources Water Resources Application for Project Permits (WRAPP) for all sites greater than one acre.
☐	☐	☒	Provide a copy of US Army Corps of Engineers 404 permit.
☐	☐	☒	Provide cross access agreements for use of entrances.
☒	☐	☐	Provide off-site utility easements.
☐	☐	☒	Provide hydraulic gradeline calculations for all storm sewer pipes signed and sealed by a professional engineer licensed in the State of Wisconsin.
☐	☐	☒	Provide a storm water management plan and calculations signed and sealed by a professional engineer licensed in the State of Wisconsin.

All Plan Sheets

YES	NO	N/A	
☒	☐	☐	Plans prepared on sheets measuring 11” high by 17” wide or no larger than 24" high by 36" wide.
☒	☐	☐	Sanitary Sewer, watermain and storm sewer system plans for the entire development are included.
☐	☐	☒	A profile view is located below a plan view on plan and profile sheets and both views are aligned by stationing whenever possible. In general, stationing is from left to right.
☐	☐	☒	Plan and profile sheets start and terminate at match lines.
☒	☐	☐	The assumed bearing base, control monuments and stationing reference line(s)
☒	☐	☐	Right-of-way limits and easement limits
☒	☐	☐	Edge of pavement or flange, face and back of curb
☒	☐	☐	Name of each existing, proposed, and future roadway and any intersecting roadways
☒	☐	☐	Lot lines, lot and block numbers
☒	☐	☐	Addresses and names of Owners for existing parcels

☒	☐	☐	All obstructions located within the project limits including, but not limited to: trees, signs, utilities, fences, light poles, structures, etc.
☒	☐	☐	A note warning that underground utilities must be located by “Diggers Hotline” prior to start of construction
☒	☐	☐	Legend (relevant to each sheet) showing all special symbols, line types and hatch used
☒	☐	☐	Title block includes at a minimum, the following information: Name and address of engineering (design) firm and owner/developer Date of the drawing and last revision Scale Plan sheet number (# of #) Name and location description of development
☒	☐	☐	North to the top or right of the sheet and shown by a north arrow, clearly shown without intrusion.
☒	☐	☐	Scale of the plans 1" = 40' horizontally and 1" = 8' vertically for 11” by 17” plan sheets and 1" = 20' horizontally and 1" = 4' vertically for 22” by 34” sheets. Partial site plans have a scale of 1" = 20' or larger. The scale of details is such that the detail is clearly shown. The scale is shown with a line scale and text.
☒	☐	☐	Existing surface objects indicated with screened lines and clearly labeled.

Cover Sheet

YES	NO	N/A	
☐	☐	☐	Project title.
☐	☐	☐	Location Map (Proximity to two main streets minimum).
☐	☐	☐	Index of all plan sheets
☐	☐	☐	For large or phased subdivisions, a key map of layout and phases.
☐	☐	☐	A minimum of two (2) current SEWRPC reference benchmarks. Survey documentation of tie to Wisconsin State Plane Coordinate System, South Zone (horizontal) and City of Waukesha datum (vertical) provided. Elevations shown based on City of Waukesha datum.
☐	☐	☐	All permanent or temporary benchmarks and elevations.
☐	☐	☐	A description of the locations of the benchmarks; and the basis or origin of the vertical control network.
☐	☐	☐	Date of plan preparation and applicable revision date(s)
☐	☐	☐	The following statement: “*All site improvements and construction shown on the plans shall conform to the City of Waukesha Development Handbook & Infrastructure Specifications. Where the plans do not comply, it shall be the sole responsibility and expense of the Developer to make revisions to the plans and/or constructed infrastructure to comply.*”

Roadway

YES	NO	N/A	
☐	☐	☒	For all new streets, a site specific geotechnical evaluation and pavement design submitted with the plans.
☐	☐	☒	A separate detail sheet showing typical cross-sections for each roadway standard width and cul-de-sac if applicable.

Plan View

YES	NO	N/A	
☒	☐	☐	The assumed bearing base, control monuments and stationing reference line along the centerline of the roadway, including cul-de-sacs.
☒	☐	☐	At least one clearly labeled benchmark or control point per sheet.
☒	☐	☐	Pavement and median dimensions.
☒	☐	☐	Final grade elevations at 25’ intervals at the right-of-way including at the edge of pavement for rural sections or at the flange of curb for urban sections.
☐	☐	☒	Final grade elevations for cul-de-sacs at 25’ intervals at the right-of-way including at the edge of pavement for rural sections or at the flange of curb for urban sections.
☒	☐	☐	Label all PVC’s, PVT’s, and PC’s, PT’s for vertical and horizontal curves. Radii of all intersections (edge of pavement or flange of curb, with note indicating which is referenced).
☒	☐	☐	Driveways for all lots adjacent to storm inlets and intersections.
☒	☐	☐	Sidewalks labeled and dimensioned.
☒	☐	☐	Existing, proposed, future streets and drives labeled and dimensioned.
☐	☐	☒	All roadside ditch locations, flowline elevations at 50’ intervals of the ditches.
☒	☐	☐	Slope intercepts.
☐	☐	☒	Invert profile for 200’ downstream for any existing ditches receiving flow from a proposed road or street.
☒	☐	☐	Limits of any areas which need special stabilization techniques.
☐	☐	☒	Specific details of all existing connected roadways. Pavement, shoulders, ditches, curb alignment, and grades shall be shown as needed to adequately make the transition.

Intersection Details

YES	NO	N/A	
☐	☐	☒	Radii of all intersections (edge of pavement or flange of curb, with note indicating which is referenced).
☐	☐	☒	Sidewalks and accessible ramps labeled and dimensioned.
☐	☐	☒	Right of way corner clips and sight visibility easements.
☐	☐	☒	Spot grades as necessary to ensure proper drainage and compliant ADA slopes.
☐	☐	☒	Spot grades shall be shown at end of radius for all curb and gutter and the end radius for all back of sidewalk.
☐	☐	☒	Drainage clarified by flow arrows, high points, sags, ridges, etc. Slope intercepts shall be clearly labeled by station, elevation to the nearest 0.1’, and offset distance (left or right) from the reference line.
☐	☐	☒	Invert elevation of ditches (for rural roadway).
☐	☐	☒	Final subgrade elevation at the centerline of the street or roadway.

Cross Sections

YES	NO	N/A	
☐	☐	☒	Right of way limits.
☐	☐	☒	Slope intercepts clearly labeled.
☐	☐	☒	Elevations to the nearest 0.01'.
☐	☐	☒	Offset distance (left or right) from the reference line.
☐	☐	☒	Final grade elevations at back of walk, face of walk, top of curb, flange elevation (edge of pavement for rural section), and the centerline of the street or roadway.
☐	☐	☒	Cross slope of sidewalk, terrace area, and roadway.
☐	☐	☒	Invert elevation of ditches (for rural section)

City of Waukesha

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Site, Grading and Drainage Plan Conditional Use Permit Checklist

Attachment C
(Rev 12/18)

Project Name: Springhouse Waukesha

Engineering & Design Firm: Pinnacle Engineering Group

General Requirements

YES	NO	N/A	
☒	☐	☐	Applicant's name
☒	☐	☐	Name and location of development
☒	☐	☐	Scale and north arrow
☒	☐	☐	Date of original and revisions noted
☐	☐	☒	License number and professional seal
☐	☐	☒	Digital Drawings in AutoCAD format of the site layout & building plan layout
☐	☐	☒	Pay impact fees

Building Plans

YES	NO	N/A	
☐	☐	☒	Contact Community Development Department

Site Plans

YES	NO	N/A	
☒	☐	☐	Dimensions of development site
☒	☐	☐	Location, footprint, and outside dimensions
☒	☐	☐	Existing and proposed pedestrian access points
☒	☐	☐	Existing and proposed vehicular access points
☒	☐	☐	Parking lots, driveways shown
☐	☐	☒	Front, side and rear yard setbacks shown and labeled
☒	☐	☐	Location, identification and dimensions of all existing or planned easements
☒	☐	☐	Identification of all land to be dedicated
☒	☐	☐	Location, elevation, and dimensions of walls and fences
☒	☐	☐	Location of outdoor lighting with lighting design plan and calculations
☐	☐	☒	Sign complies with City Code Book
☒	☐	☐	Location of existing and proposed signs

Site Access

YES	NO	N/A	
☐	☐	☒	Legal description or certified survey of property
☒	☐	☐	Development compatible with its zoning district
☒	☐	☐	Sidewalks to be shown
☒	☐	☐	Site entrance drive dimensions
☒	☐	☐	Individual development vehicular entrances at least 125 feet apart
☐	☐	☒	Adjacent development share driveway where possible
☒	☐	☐	At least one vehicular and pedestrian access point to each adjoining site granted by cross easements
☒	☐	☐	Cross access to be provided with minimum paved width of 24 feet
☐	☐	☒	Design detail for all new public streets

Parking/Traffic

YES	NO	N/A	
☒	☐	☐	5-foot wide (min) paved walkway to building entrance
☒	☐	☐	7-foot parking separation from front of building
☒	☐	☐	Minimum parking spaces provided
☐	☐	☒	Service truck parking in designated service areas
☒	☐	☐	Parking spaces and layout dimensioned
☒	☐	☐	Lot paved with HMA or concrete
☒	☐	☐	Handicap parking provided
☐	☐	☒	Minimum required stacking distance
☒	☐	☐	Concrete curb and gutter around parking lot

Grading and Drainage Plans

YES	NO	N/A	
☒	☐	☐	Show existing tree lines and any obstructions (fences, structures, power poles, etc.) within the project limits.
☒	☐	☐	All proposed lot lines and lot numbers or addresses
☒	☐	☐	Lot line dimensions
☐	☐	☒	Outline of buildable areas for each lot
☐	☐	☒	Typical setbacks of buildable area to front, side and back lot lines
☒	☐	☐	All existing buildings, structures and foundations
☒	☐	☐	All existing drainage channels and watercourses
☒	☐	☐	Emergency overflow routes
☒	☐	☐	Drainage clarified by flow arrows, high points, sags, ridges, and valley gutters
☒	☐	☐	Proposed retaining wall locations with top and bottom of wall elevations at key locations
☐	☐	☒	100-year flood plain limit (both pre-and post-project)
☐	☐	☒	100-year storm water surface elevation
☐	☐	☒	Wetlands. Wetland limits labeled with bearings and distances and dimensioned to lot lines. Bearings and distances may be shown in tabulated format.

☐	☐	☒	All environmental corridors, & or environmentally sensitive areas as required by DNR
☒	☐	☐	All existing and proposed easements.
☒	☐	☐	Existing topography of the site and all areas within 50 feet of the site shown at a one foot contour interval using City of Waukesha datum. Existing contours shown as thin, dashed screened or grey lines with a readily discernable heavier line used for the 5-foot contour intervals.
☒	☐	☐	Proposed grading shown at a contour interval of 1 foot using City of Waukesha datum. Proposed contour lines shown as solid medium lines, with a discernible heavier line use for the 5-foot contour intervals.
☒	☐	☐	The yard grade and first floor elevation of proposed building and any existing buildings located within 150 feet of the parcel boundary.
☒	☐	☐	Proposed road(s), curb and gutter, all storm sewer grates and storm sewer manholes (or cross-culverts for open ditches). Show any off-road storm inlets and discharge locations with surface entry elevations.
☒	☐	☐	Spot grades as necessary to ensure proper drainage and compliant ADA slopes and routing where applicable.
☐	☐	☒	At front setback line show a typical house shell on each lot and the proposed yard grade to the nearest tenth of a foot (assumed to be 0.7' below the top of block) for each building. Show proposed finished elevations to the nearest tenth of a foot at all lot corners and alongside lot lines adjacent to the front and back corners of the typical house. Show proposed finished elevations to the nearest tenth of a foot at high and low points along any side or back lot lines, and at high and low points if roads to demonstrate proposed drainage.
☒	☐	☐	The grading plan for any house that will require special design due to topography, clearly show separate grades for the garage and yard grade if extra steps are needed. Separate spot finish elevations shown for rear or side exposure or walkout.
☐	☐	☒	Indicate minimum finished floor elevations adjacent to floodplains, ponds, creeks/channels, etc.
☒	☐	☐	Proposed storm inlets shown on each grading plan. Each plan also includes specific details on all applicable retention/detention basins, ponds, overflows, etc. Separate sheets or notes as required.
☒	☐	☐	Locations of existing and proposed streets, drives, alleys, easements, right-of-way, parking as required, vehicular and pedestrian access points, and sidewalks
☐	☐	☒	Outline of any development stages
☐	☐	☒	Location and details on any required emergency access roads
☐	☐	☒	Soil characteristics
☒	☐	☐	Existing and proposed topography shown for the site and or adjacent properties
☐	☐	☒	Floodplain, shore land, environmental and wetlands shown
☒	☐	☐	Location and dimensions of on-site storm water drainage facilities
☒	☐	☐	Location and footprint of all existing buildings
☒	☐	☐	Locations and species of existing trees
☐	☐	☒	Berm detail
☐	☐	☒	Lot grades and swales shown
☐	☐	☒	Drainage calculations provided

Erosion Control

YES	NO	N/A	
☒	☐	☐	Location Map
☐	☐	☒	Soils Survey Map
☒	☐	☐	Existing Land Use Mapping
☒	☐	☐	Predeveloped Site Conditions
☒	☐	☐	• Existing contours
☒	☐	☐	• Property lines
☒	☐	☐	• Existing flow paths and direction
☒	☐	☐	• Outlet locations
☐	☐	☒	• Drainage basin divides and subdivides
☒	☐	☐	• Existing drainage structures on and adjacent to the site
☐	☐	☒	• Nearby watercourses
☐	☐	☒	• Lakes, streams, wetlands, channels, ditches, etc.
☐	☐	☒	• Limits of the 100-year floodplain
☐	☐	☒	Practice location/layout/cross sections
☐	☐	☒	Construction Details
☐	☐	☒	Name of receiving waters
☐	☐	☒	Site description/Nature of construction activity
☒	☐	☐	Sequence of construction
☒	☐	☐	Estimate of site area and disturbance area
☐	☐	☒	Pre- and post-developed runoff coefficients
☒	☐	☐	Description of proposed controls, including
☒	☐	☐	• Interim and permanent stabilization practices
☐	☐	☒	• Practices to divert flow from exposed soils
☒	☐	☐	• Practices to store flows or trap sediment
☐	☐	☒	• Any other practices proposed to meet ordinance
☒	☐	☐	Existing topography of the site and all areas within 50 feet of the site shown at a one foot contour interval using City of Waukesha datum. Existing contours shown as thin, dashed screened or grey lines with a readily discernable heavier line used for the 5-foot contour intervals.
☒	☐	☐	Proposed grading shown at a contour interval of 1 foot using City of Waukesha datum. Proposed contour lines shown as solid medium lines, with a discernible heavier line use for the 5-foot contour intervals.
☒	☐	☐	List the total disturbed acreage including offsite areas.
☐	☐	☒	Provide free survey in accordance with City Erosion Control Ordinance
☒	☐	☐	Proposed limits of disturbance including proposed tree cutting areas.
☒	☐	☐	Location and dimensions of all temporary topsoil and dirt stockpiles.
☒	☐	☐	Location and dimensions of all appropriate best management practices (BMP).
☒	☐	☐	Phasing of BMP's with the construction activities listed / described.
☐	☐	☒	Schedule of anticipated starting and completion date of each land disturbing and land developing activity, including the installation of the BMP measures that are needed.
☒	☐	☐	Location of all channels, pipes, basins or other conveyances proposed to carry runoff to the nearest adequate outlet, including applicable design assumptions and computations.

☒	☐	☐	Areas to be sodded or seeded and mulched or otherwise stabilized with vegetation, describing the type of final vegetative cover.
☒	☐	☐	Areas of permanent erosion control (other than vegetation).
☒	☐	☐	Boundaries of the construction site
☒	☐	☐	Drainage patterns/slopes after grading activities
☒	☐	☐	Areas of land disturbance
☐	☐	☒	Locations of structural and nonstructural controls
☐	☐	☒	Drainage basin delineations and outfall locations

Optional Submittals as Determined by Review Authority

YES	NO	N/A	
☐	☐	☐	Traffic impact analysis
☐	☐	☐	Environmental impact statement
☐	☐	☐	Soil and Site Evaluation Report per DNR Technical Standard 1002
☐	☐	☐	Plot of effect of exterior illumination on site and adjacent properties
☐	☐	☐	Description of any unusual characteristics
☐	☐	☐	Street perspectives showing view corridors
☐	☐	☐	Historic site
☐	☐	☐	Economic feasibility study
☐	☐	☐	Contaminated Waste Site

I hereby certify that I have reviewed the City ordinances and provided one (1) full-sized set of all required information along with all the required reduced copies of plans.

Applicant's Signature: _____

City of Waukesha
Department of Public Works
130 Delafield Street
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Waukesha-wi.gov

Stormwater Management Plan

Attachment D
(Rev 12/18)

Project Name: Springhouse Waukesha

Engineer & Design Firm: Pinnacle Engineering Group

STORM WATER MANAGEMENT PLAN WORKSHEET			
The City of Waukesha requires a Stormwater Management Plan to be submitted with the proposed development plans for site plan review. A Stormwater Management Plan is a document describing the storm water management practices constructed and implemented within the proposed development to ensure compliance with the storm water management criteria, as set forth by the City of Waukesha. The purpose of a Stormwater Management Plan is to protect the safety and health of the public, property and aquatic environment from the threats due to storm water from land development activity. The worksheet will provide a basis to the information that shall be provided when preparing a Stormwater Management Plan for a proposed development. This Plan shall include a set of complete plans and calculations, stamped by a registered professional engineer. Stormwater Management Plans are required as listed in City Code Book Chapter 32.06(b)			
Exemptions for Design and Plan Requirements			
YES	**NO**	**N/A**	
☐	☒	☐	Site is associated with agricultural or sylvicultural activities
Design Requirements: Total Suspended Solids			
YES	**NO**	**N/A**	
☐	☒	☐	Site is a New Development – 80% Reduction must be met
☐	☒	☐	Site is an Infill Development – 80% Reduction must be met
☒	☐	☐	Site is a Redevelopment – 40% Reduction must be met
☐	☒	☐	Site has areas of New Development and Redevelopment
☒	☐	☐	Calculations for % Reduction are included in the plan (WinSLAMM input and output)
☒	☐	☐	Storm water Management Facilities to address TSS removal are designed according to Chapter 32 of the City Code Book and DNR Technical Standards – Check all that apply: ☐ Wet Detention Basin ☒ Bio Retention Basin ☐ Swales ☐ Proprietary Devices ☐ Other (specify): _____
Design Requirements: Peak Discharge			
YES	**NO**	**N/A**	
☒	☐	☐	Storm water Management Facilities to address Peak Discharge are designed according to Chapter 32 of City Code Book and DNR Technical Standards – Check all that apply: ☐ Wet Detention Basin ☒ Bio Retention Basin ☐ Swales ☐ Other (specify): _____
☒	☐	☐	Downstream Capacity for 2-year, 10-year and 100-year, 24-hour design storms are met
☐	☐	☒	Calculations of available capacity, proportional share, and proposed utilized capacity under all design storms are included in plan
☒	☐	☐	Calculations of Peak Discharge are included in the plan

Design Requirements: Infiltration			
YES	**NO**	**N/A**	
☐	☐	☒	Hydraulic Soil Type: ☐ Soil Type A – Proceed ☐ Soil Type B – Proceed ☐ Exemption or Exclusion – Provide documentation
☐	☐	☒	Site and Soil Evaluation Report per DNR Technical Standard 1002
☐	☐	☒	Low Imperviousness. Ex: low density residential parks, cemeteries Post-Development Infiltration Performance Standards: ☐ Up to 40% Connected Impervious Surface ☐ 90% of Pre-Development Infiltration volume met ☐ 1% of site – Maximum Effective Infiltration Area
☐	☐	☒	Medium Imperviousness. Ex: Medium and high density residential, multi-family, industrial, institutional, office park. Post-Development Infiltration Performance Standards: ☐ 40%-80% Connected Impervious Surface ☐ 75% of Pre-Development Infiltration volume met ☐ 2% of site – Maximum Effective Infiltration Area
☐	☐	☒	High Imperviousness. Ex: commercial strip malls, shopping centers, commercial downtowns Post-Development Infiltration Performance Standards: ☐ Greater than 80% Connected Impervious Surface ☐ 60% of Pre-Development Infiltration volume met ☐ 2% of site – Maximum Effective Infiltration Area
☐	☐	☒	Site has parking lots and new road construction: ☐ Pretreatment included ☐ 10% Infiltration of the runoff from the tow-year, 24-hour design storm with Type II Distribution
☐	☐	☒	Calculations of Infiltration Volumes are included in the plan and model input and output (WinSLAMM)
☐	☐	☒	Exclusions for Infiltration: ☐ Tier 1 Industrial Facility ☐ Storage and Loading Areas of Tier 2 Industrial Facility ☐ Fueling and Vehicle Maintenance Facility ☐ Areas within 1,000 feet up gradient of Karst Features ☐ Areas within 100 feet downgradient of Karst Features ☐ Areas with < 3 feet of separation from bottom of Infiltration System to seasonal high groundwater or top of bedrock (does not prohibit roof runoff) ☐ Areas with runoff from industrial, commercial and institutional parking lots and roads with < 5 feet separation from bottom of infiltration system to elevation of seasonal high groundwater or top of bedrock ☐ Areas within 400 feet of community water system well ☐ Areas within 100 feet of private well ☐ Areas where contaminants of concern (defined by NR720.03(2) are present in the soil through which infiltration will occur) ☐ Area where soil does not meet any of the following characteristics between bottom of infiltration system and seasonal high groundwater and top of bedrock: ☐ *At least 3-foot soil layer with 20% fines or greater* ☐ *At least 5-foot soil layer with 10% fines or greater*

YES	NO	N/A	
☒	☐	☐	Exemptions for Infiltration: ☐ Areas where infiltration rate < 0.6 inches/hour ☐ Parking Areas and Access Roads less than 5,000 square feet for commercial and industrial ☒ Redevelopment Post-Construction Sites ☐ Infill Development < 5 acres ☐ Infiltration during periods when soil on the site is frozen ☐ Roads in commercial, industrial and institutional land uses ☐ Arterial Roads in Residential land uses
☐	☐	☒	Storm water Management Facilities to address Infiltration are designed according to Chapter 32 of the City Code Book and DNR Technical Standards – Check all that apply: ☐ Bioretention Basin (1004) ☐ Infiltration Basin (1003) ☐ Infiltration Trench (1007) ☐ Permeable Pavement (1008) ☐ Rain Garden (1000) ☐ Other (specify): _____
Design Requirements: Protective Areas			
YES	**NO**	**N/A**	
☐	☐	☒	Impervious areas are outside protective area. If not, provide a written explanation.
☐	☐	☒	Land disturbing activities are within a protective area. If **Yes**, check all that apply: ☐ If no impervious area is within protective area, adequate sod or self-sustaining vegetative cover of 70% or greater shall be established. ☐ Adequate sod or self-sustaining vegetative cover is sufficient for bank stability, maintenance of fish habitat and filtering of pollutants from upslope overland flow areas under sheet flow conditions. ☐ Non-Vegetative materials are employed on the bank as necessary to prevent erosion (steep slopes, high velocity areas).
☒	☐	☐	Best Management Practices are located within the protective area – Check all that apply: ☐ Filter Strips ☐ Swales ☒ Wet Detention Basins ☐ Other (specify): _____
☐	☐	☒	Non-Applicable Areas Apply: ☐ Structures that cross or access surface water (boat landing, bridge, culvert) ☐ Structures constructed in accordance with Section 59.692(1v) Wisconsin Statutes: ☐ Post-Construction Runoff does not enter surface water except to the extent that vegetative groundcover necessary for bank stability
Design Requirements: Fuel and Maintenance Facilities			
YES	**NO**	**N/A**	
☐	☐	☒	Are Fuel and Maintenance Facilities on the Site?
☐	☐	☒	Are Best Management Practices designed to reduce petroleum within runoff (no visible sheen)?

Design Requirements: Swale Treatment for Transportation Facilities			
YES	**NO**	**N/A**	
☐	☐	☒	Does the site use swales for runoff conveyance and pollutant removal for transportation facilities? If **Yes**, must have the following: *Groundcover:* ☐ Vegetated ☐ Non-Vegetated where appropriate to prevent erosion or provide runoff treatment (riprap, check dams) *Swale Velocity Control:* ☐ Swale is 200 feet or more in length with a velocity no greater than 1.5 feet per second for the two-year, 24-hour design storm or two-year storm with duration equal to time of concentration ☐ Swale is 200 feet or more in length with velocity > 1.5 feet per second then velocity is reduced to maximum extent practicable. Written explanation stating why requirement of > 1.5 feet per second cannot be met
☐	☐	☒	Exemptions Apply: Average Daily Vehicles > 2,500 and initial surface water of the state that runoff directly enters is any of the following: ☐ An outstanding resource of water (ORW) ☐ An exceptional resource water (ERW) ☐ Water is listed in Section 303(d) of the Federal Clean Water Act and is identified as impaired in whole or in part due to non-point source impacts ☐ Water where targeted performance standards are developed under NR 151.004 of the Wisconsin Administrative Code to meet water quality standards
Plan Requirements			
YES	**NO**	**N/A**	
☐	☐	☒	Provide permit application form, including contact information (name, address, telephone number) for the landowner, developer, land operator, certified project engineering, responsible party for installation of storm water management practices, responsible party for long-term maintenance of the storm water management practices.
☐	☐	☒	Legal Description of proposed development.
☒	☐	☐	Narrative describing the proposed development.
☒	☐	☐	Brief summary of Design Criteria and methods used for development of Storm Water Management Practices.
☐	☐	☒	Storm Water Management Maintenance Agreement shall be included with the Storm Water Management Plan (see Storm Water Management Maintenance Agreement template for additional information required).
☐	☐	☒	Certification by a Wisconsin registered professional engineer.
☐	☐	☒	Financial Guarantee.

Description and Site Characteristics for Pre/Post Development conditions shall be delineated by one (1) or more site maps at a scale of not less than one (1") inch equals two hundred (200') feet. The map(s) shall include, at minimum, the following information:			
YES	**NO**	**N/A**	
☒	☐	☐	Site Location and Legal Description.
☐	☐	☒	Pre-developed and revised topography by contours related to USGS survey datum or other datum approved by City. The topographic contours of the site shall not exceed 2 feet. The topography shall extend at minimum 100 feet outside the site boundaries to show runoff patterns onto, through and from the site.
☐	☐	☒	One hundred (100) year Floodplain boundary, shore land, environmental corridors, and wetland boundaries shall be delineated if applicable
☐	☐	☒	All lakes, streams, and other water bodies illustrated on map shall be named as defined on a USGS 7.5 minute topographic map.
☐	☐	☒	Predominant Soil Types and Hydraulic Soil Group Classifications per NRCS
☐	☐	☒	Coordinates of all manhole and inlets with reference to two nearest reference point monuments which shall be Section or ¼ Section corners.
☐	☐	☒	Location, capacity, and dimensions/details of on-site Pre-developed and Post-developed storm water management facilities such as, but not limited to, the following: manholes, pipes, curbs, gutters, curb inlets, filter strips, swales, detention basins, curb cuts, and drainage gates.
☐	☐	☒	Location, extent, detailed drawings, typical cross sections and slope ratios of all pre-developed and post-developed storm water retention and detention areas and drainage ways – list inlet/outlet elevations, permanent water surface elevation, high water surface elevation, and emergency spillway elevation, if applicable.
☐	☐	☒	Location and Elevations at top and bottom of pre-developed and post-developed buildings and structures.
☐	☐	☒	Locations and names of pre-developed and post-developed streets and intersections and the location of parking lots, sidewalks, bike paths and impervious surfaces (excluding single family residences). Map(s) shall clearly differentiate pre-developed and post-developed surfaces.
☐	☐	☒	Delineation and dimensions of all pre-developed and post-developed property boundaries, easements, right-of-way, building setbacks, maintenance easements, and other restrictions.
☐	☐	☒	Pre-developed and post-developed land use boundaries, including cover type and condition.
☐	☐	☒	Post-developed land use cover totals for Impervious and Pervious areas as well as permanent water surface area of all storm water management facilities.
☐	☐	☒	Delineation of pre-developed and post-developed watershed and sub-watershed boundaries used in determination of Peak flow discharges and discharge volumes from the site. (If the watershed extends beyond the site boundaries, a separate watershed map can be supplied).
☐	☐	☒	Location of the pre-developed and post-developed discharge points.
☐	☐	☒	Pre/Post developed directional Flow Paths used to calculate existing/proposed time of concentrations.
☒	☐	☐	Location of the Emergency Overland Flow.
☐	☐	☒	Location of any Regional Treatment Options (if applicable).
☐	☐	☒	Identify all pre-developed land cover features, such as, natural swales, natural depressions, native soil infiltrating capacity and natural groundwater recharge areas.
☐	☐	☒	Location of any protective areas within the site.
☐	☐	☒	Location of wells located within 1,200 feet of pre-developed and post-developed Storm Water Detention Basins, Infiltration Basins, or Infiltration Trenches.
☐	☐	☒	Delineation of Wellhead protection areas defined under NR 811.16

Supportive Information and Calculation summaries shall be supplied for all storm water management requirements as dictated in the checklist under Design Requirements:			
YES	**NO**	**N/A**	
☐	☐	☒	Pre-developed and post-developed watershed, sub-watersheds, and land use areas (acres, watershed shall be delineated by property lines).
☒	☐	☐	Pre-developed and post-developed impervious areas (acres).
☐	☐	☒	Pre-developed and post-developed Runoff Curve Numbers.
☐	☐	☒	Pre-developed and post-developed Time of Concentration.
☐	☐	☒	Pre-developed and post-developed peak flows for the 2-year, 10-year and 100-year, 24-hour storm events for each discharge point.
☐	☐	☒	Total suspended solids removal computations to show compliance.
☐	☐	☒	Design computations for the runoff volume of the pre-developed and post-developed conditions to show compliance with the infiltration requirements.
☐	☐	☒	Design computations for all storm water drainage facilities such as, but not limited to, inflow/outflow rates, hydrographs, water surface elevations, outlet design computations, runoff discharge volume, velocities, and stage/storage data.
☐	☐	☒	Design computations for the 10-year Rational Method flows for all proposed storm conveyance systems.
☐	☐	☒	Computation of the available downstream capacity flowing full, overflow level of ditches and the top of the upstream end of the pipe for any culverts.
☐	☐	☒	Computation of the downstream capacity using the 5-year rational storm.
☐	☐	☒	Tail water analysis included in storm water design for 2-year, 10-year and 100-year storm events.
☐	☐	☒	Design computations to illustrate compliance with pollutant loading criteria (Storm Water Quality Management practices) with pre- and post-storm water management facilities.
☒	☐	☐	Narrative describing all assumptions that were deemed appropriate for design.
☐	☐	☒	Explanation of provisions to preserve and use natural topography and land cover features.
☐	☐	☒	Explanation of restrictions on Storm Water Management practices by wellhead protection plans (if applicable).
☐	☐	☒	Results of investigations of soil and groundwater required for installation of Storm Water Management practices.
☐	☐	☒	Impact assessment results on Wetland Functional Values (if applicable).
☐	☐	☒	Storm Water Management practices installation schedule.
☐	☐	☒	Cost estimate for the construction, operation and maintenance of each Storm Water Management practice.
☐	☐	☒	Any additional information that the City, or designee, may need to evaluate the impacts of the storm water discharge quality and quantity on the existing area and existing utilities.