

**CITY OF WEST DES MOINES
PLAN AND ZONING COMMISSION COMMUNICATION**

Meeting Date: October 8, 2018

Item: King's Grove Townhomes, 9975 Booneville Rd – Subdivide the property into 90 lots and 1 outlot for a townhome development– King's Grove LLC– PP-003926-2018/SP-003927-2018

Requested Action: Recommend approval of Preliminary Plat and Site Plan

Case Advisor: J. Bradley Munford 

Applicant's Request: King's Grove LLC, represented by Erin Ollendike of Civil Design Advantage, is requesting approval of an 11.68 acre Preliminary Plat to create 90 postage stamp lots and 1 outlot for private drives, common use and storm water detention. The applicant is also seeking approval of a Site Plan to allow construction of a 90 lot townhome development.

History: The property was annexed into the city in 2010 as a part of the Raccoon River Annexation. The home on the land was built prior to annexation. The Medium Density Comprehensive Plan designation was established September of 2010. The City Council approved a rezoning from 'Unzoned' to Residential Medium Density (RM-12) on August 7, 2017.

City Council Subcommittee: This item was be presented at the June 11, 2018 Development and Planning City Council Subcommittee as an informational item. The Subcommittee expressed support of the development.

Staff Review and Comment: This request was distributed to other City departments and other agencies for their review and comment. There are no outstanding issues. Staff would note the following:

- *Vacation of Stark Drive:* The development is proposed to have one of its points of access from Stark Drive, which is a stub street that was constructed as a part of Kings Landing. Stark Drive is an existing public stub street located at approximately the northeast corner of this development. The applicant is proposing to extend a private drive from Stark Drive's current terminus point, west into the townhome development. The extension would be linear in nature, would not provide a turnaround for public service vehicles, and would not have a clear demarcation of where the private drive begins. The applicant has worked with staff and the City intends to vacate approximately 150 feet of the Stark Drive Right-of-Way, west of S 100th Street. Once vacated, the applicant will need to purchase the property at fair market value and add the appropriate access and utility easements necessary for the functionality of the private drive. The vacated ROW will need to be owned by the applicant prior to the approval of a final plat. Staff is comfortable with the applicant's requests and is recommending a condition to that effect.

Comprehensive Plan Consistency: The project has been reviewed for consistency with the Comprehensive Plan. Based upon that review, a finding has been made that the proposed project is consistent with the Comprehensive Plan in that the project is consistent with all of the goals and policies of the Comprehensive Plan and the land use map of the Comprehensive Plan.

Findings: This proposed project was distributed to various city departments for review and comment. Based upon that review, the following findings have been made on the proposed project:

1. The proposed development and use is consistent with the West Des Moines Comprehensive Plan in that the project has been reviewed for consistency with the Comprehensive Plan. Based upon that review, a finding has been made that the proposed project is consistent with the Comprehensive Plan in that the project is consistent with all of the goals and policies of the Comprehensive Plan.

2. The proposed development and use does assure compatibility of property uses within the zone and general area in that this project was reviewed by various City Departments for compliance with the Zoning Ordinance.
3. All applicable standards and conditions have been imposed which protects the public health, safety and welfare in that this project was reviewed by various City Departments and public agencies for compliance with the various state and local regulations. Based upon that review a finding is made that the project has been adequately conditioned to protect the health, welfare and safety of the community.
4. There is adequate on-site and off-site public infrastructure to support the proposed development in that this project was reviewed by various public agencies and City Departments and public utilities to ensure that either the petitioner will construct or the project has been conditioned to construct adequate public infrastructure to serve the development.
5. The proposed development and use has met the requirements contained in the City Code in that this project was reviewed by various City Departments and the project has complied with or has been conditioned to comply with all City Code requirements.
6. The proposed development and use is in keeping with the scale and nature of the surrounding neighborhood in that the proposed project is consistent with the zoning designation and Comprehensive Plan which designates this site as suitable for development such as that proposed by this project.

Staff Recommendation and Conditions Of Approval: Based upon the preceding review and a finding of consistency with the goals and policies of the Comprehensive Plan, staff recommends the Plan and Zoning Commission adopt a resolution recommending the City Council approve the Preliminary Plat to create 90 lots and 1 outlot and approve the Site Plan to allow the construction of a townhome development and associated site improvements, subject to the applicant meeting all City Codes and the following conditions of approval:

1. Applicant acknowledging and agreeing that approximately 150 feet of Stark Drive, west of S 100th Street, shall be vacated and owned by the applicant prior to the approval of a final plat.
2. The applicant acknowledging and agreeing to submit a revised site plan that reflects minor revisions requested by Staff prior to the case being heard by the City Council.

Property Owner/Applicant: King's Grove, LLC
 Brad Stanbrough
 10888 Hickman Road, Suite A
 Clive, IA 50325
brad@ele119.com

Applicant's Representative: Erin Ollendike
 Civil Design Advantage
 3405 SE Crossroads Drive, Suite G
 Grimes, IA 50111
ErinO@cda-eng.com

ATTACHMENTS:

- | | | |
|--------------|---|---------------------------------------|
| Attachment A | - | Plan and Zoning Commission Resolution |
| Exhibit A | - | Conditions of Approval |
| Attachment B | - | Location Map |
| Attachment C | - | Preliminary Plat / Site Plan |
| Attachment D | - | Building Elevations |

RESOLUTION NO. PZC- 18-065

A RESOLUTION OF THE PLAN AND ZONING COMMISSION OF THE CITY OF WEST DES MOINES, RECOMMENDING TO THE CITY COUNCIL THAT IT APPROVE A PRELIMINARY PLAT TO SUBDIVIDE THE PROPERTY INTO 90 LOTS AND 1 OUTLOT AND APPROVE A SITE PLAN FOR THE CONSTRUCTION OF A TOWNHOME DEVELOPMENT

WHEREAS, pursuant to the provisions of Title 10 of the West Des Moines Municipal Code, the applicant, The King’s Grove LLC, has requested approval for a Preliminary Plat (PP-003926-2018) for that approximately 11.68 acre site located at 9975 Booneville Rd to subdivide the property into 90 postage stamp lots and 1 outlot for private drives, common use and storm water detention.

WHEREAS, pursuant to the provisions of Title 9 of the West Des Moines Municipal Code, the applicant, The King’s Grove LLC has requested approval of a Site Plan (SP-003927-2018) for that approximately 11.68 acre site located at 9975 Booneville Rd to allow the construction of 90 unit townhome development and associated site improvements;

WHEREAS, studies and investigations were made, and staff reports and recommendations were submitted which is made a part of this record and herein incorporated by reference;

WHEREAS, on October 8, 2018, this Commission held a duly-noticed public meeting to consider the applications for a Preliminary Plat (PP-003926-2018) and a Site Plan (SP-003927-2018);

NOW, THEREFORE, THE PLAN AND ZONING COMMISSION OF THE CITY OF WEST DES MOINES DOES RESOLVE AS FOLLOWS:

SECTION 1. The findings, for approval, in the staff report, dated October 8, 2018, or as amended orally at the Plan and Zoning Commission meeting of October 8, 2018, are adopted.

SECTION 2. Preliminary Plat (PP-003926-2018) and Site Plan (SP-003927-2018) to subdivide the property into 90 lots and 1 outlot and allow construction of a 90 unit townhome development are recommended to the City Council for approval, subject to compliance with all the conditions in the staff report, dated October 8, 2018, including conditions added at the meeting, and attached hereto as Exhibit “A”. Violation of any such conditions shall be grounds for revocation of the permit, as well as any other remedy which is available to the City.

PASSED AND ADOPTED on October 8, 2018.

Craig Erickson, Chairperson
Plan and Zoning Commission

ATTEST:

Recording Secretary

I HEREBY CERTIFY that the foregoing resolution was duly adopted by the Plan and Zoning Commission of the City of West Des Moines, Iowa, at a regular meeting held on October 8, 2018, by the following vote:

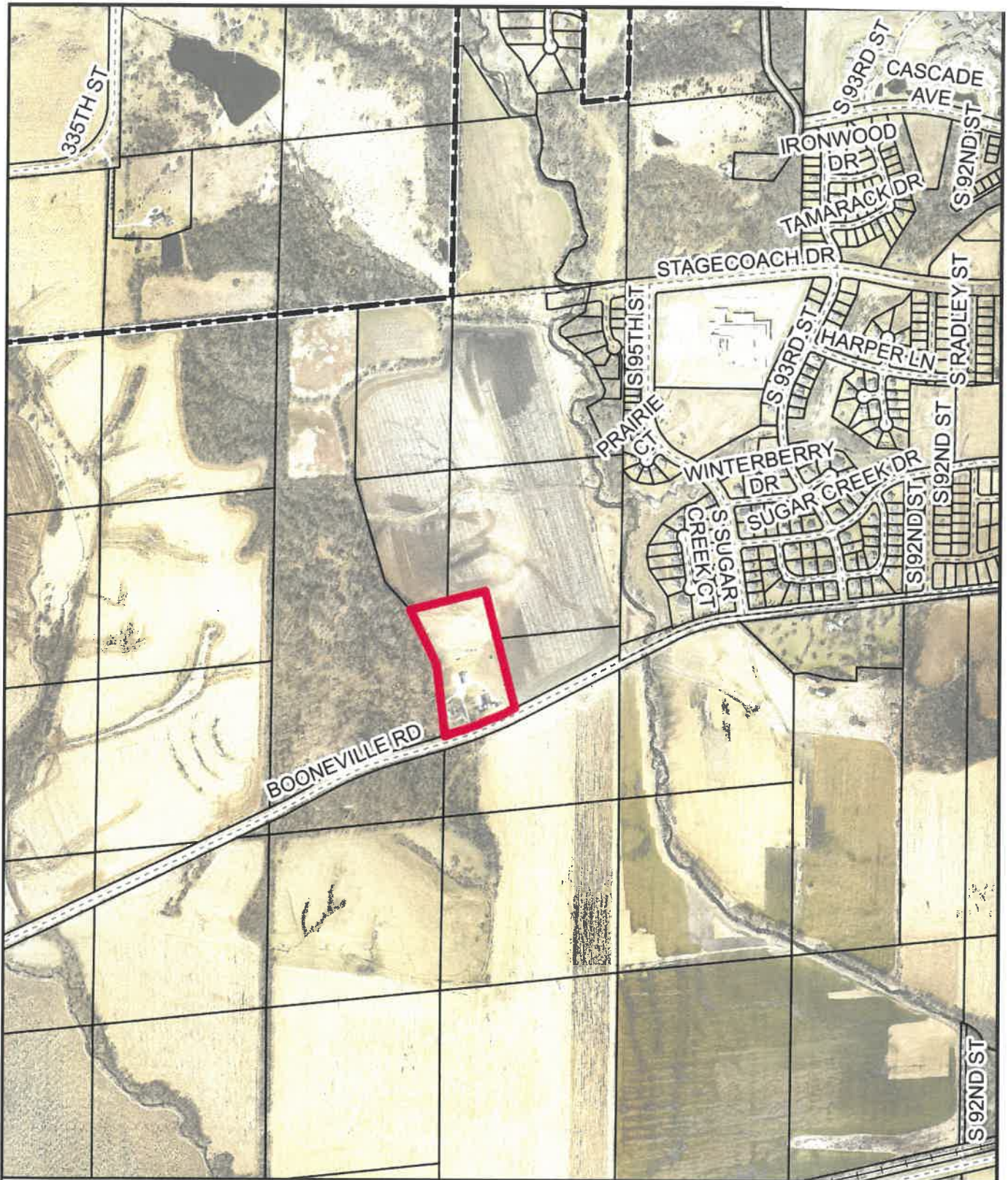
- AYES:
- NAYS:
- ABSTENTIONS:
- ABSENT:

ATTEST:

Recording Secretary

**EXHIBIT A
CONDITIONS OF APPROVAL**

1. Applicant acknowledging and agreeing that approximately 150 feet of Stark Drive, west of S 100th Street, shall be vacated and owned by the applicant prior to the approval of a final plat.
2. The applicant acknowledging and agreeing to submit a revised site plan that reflects minor revisions requested by Staff prior to the case being heard by the City Council.

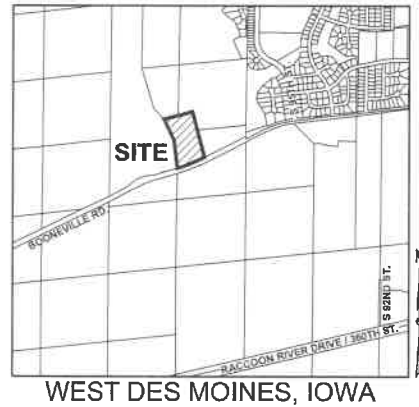


King's Grove Townhomes



PRELIMINARY PLAT AND SITE PLAN FOR: KING'S GROVE TOWNHOMES WEST DES MOINES, IOWA

VICINITY MAP
NOT TO SCALE



ZONING

RM-12 - RESIDENTIAL MEDIUM DENSITY

COMPREHENSIVE PLAN LAND USE

MEDIUM DENSITY RESIDENTIAL (MD)

DEVELOPMENT SUMMARY

AREA: 11.68 ACRES (508,620 SF)

SETBACKS:
FRONT: = 50'
SIDE: = 15'
REAR: = 35'
BUILDING SEPARATION: = 30'

OPEN SPACE CALCULATION:
TOTAL SITE: = 508,620 SF
BUILDINGS: = 103,248 SF
PRIVATE STREETS: = 45,106 SF
DRIVEWAYS: = 38,272 SF
OPEN SPACE PROVIDED = 321,994 SF (63%)

IMPERVIOUS AREA = 202,826 SF (40%)
(SIDEWALK = 16,200 SF)

UNITS:

92 UNITS (7.88 UNITS PER ACRE)

PARKING REQUIRED:

2 SPACES PER UNIT
TOTAL REQUIRED = 184 SPACES
TOTAL PROVIDED = 198 SPACES

CONSTRUCTION SCHEDULE

PHASE 1:

ANTICIPATED START DATE = FALL 2018
ANTICIPATED FINISH DATE = SPRING 2019

PHASE 2:

ANTICIPATED START DATE = FALL 2019
ANTICIPATED FINISH DATE = SPRING 2020

INDEX OF SHEETS

NO.	DESCRIPTION
1.0	COVER SHEET
2.0	TYPICAL SECTIONS AND DETAILS
3.0	DEMOLITION PLAN
4.0-4.1	DIMENSION PLAN
5.0-5.3	GRADING PLAN
6.0-6.1	EROSION AND SEDIMENT CONTROL PLAN
7.0-7.1	UTILITY PLAN
8.0-8.1	LANDSCAPE PLAN

NOTES

- EROSION CONTROL MEASURES WILL BE INSTALLED AND MONITORED BY OTHERS.
- PRIVATE UTILITIES TO BE INSTALLED PER SUDAS SPECIFICATIONS.
- ALL CONSTRUCTION WITHIN PUBLIC ROW/EASEMENTS, AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, SHALL COMPLY WITH THE WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATIONS FOR SUBDIVISIONS AND DSM METRO DESIGN STANDARDS.
- CONTACT WEST DES MOINES WATER WORKS AT LEAST ONE WEEK PRIOR TO CONSTRUCTION.
- ALL SIDEWALK CROSS SLOPES SHALL NOT EXCEED 1.5%.
- CONSTRUCTION CANNOT BEGIN ON THE TOWNHOMES UNTIL A FINAL PLAT HAS BEEN REVIEWED AND APPROVED BY THE CITY COUNCIL.
- ALL LONGITUDINAL SIDEWALK SLOPES SHALL NOT EXCEED 5%.
- PRIVATE STREETS AND UTILITIES SHALL BE MAINTAINED BY THE OWNER, TO INCLUDE:
 - DETENTION POND AND APPURTENANCES
 - PRIVATE STORM SEWER
 - PRIVATE WATER MAIN AND SERVICES
 - ALL INTERNAL CIRCULATION ROADS
- PRIOR TO CONSTRUCTION OF ANY PUBLIC IMPROVEMENTS ASSOCIATED WITH THIS SUBDIVISION, CONSTRUCTION PLANS FOR SAID IMPROVEMENTS NEED TO BE SUBMITTED TO AND APPROVED BY THE CITY ENGINEER.
- AT LEAST ONE WEEK PRIOR TO ANY CONSTRUCTION WITHIN PUBLIC R.O.W./EASEMENTS AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, THE CONTRACTOR SHALL CONTACT THE WDM ENGINEERING SERVICES 222-3475 TO SCHEDULE ANY REQUIRED INSPECTIONS. IT IS IMPORTANT TO NOTE CITY APPROVAL OF THIS PLAN IS SUBJECT TO THE APPLICANT OBTAINING ALL NECESSARY EASEMENTS/AGREEMENTS AND APPLICABLE PERMITS.

GENERAL LEGEND

PROPOSED	EXISTING
SECTION LINE	SANITARY MANHOLE
CENTER LINE	WATER VALVE BOX
RIGHT OF WAY	FIRE HYDRANT
PERMANENT EASEMENT	WATER CURB STOP
TEMPORARY EASEMENT	WELL
TYPE SW-501 STORM INTAKE	STORM SEWER MANHOLE
TYPE SW-502 STORM INTAKE	STORM SEWER SINGLE INTAKE
TYPE SW-503 STORM INTAKE	STORM SEWER DOUBLE INTAKE
TYPE SW-505 STORM INTAKE	FLARED END SECTION
TYPE SW-506 STORM INTAKE	DECIDUOUS TREE
TYPE SW-512 STORM INTAKE	CONIFEROUS TREE
TYPE SW-513 STORM INTAKE	DECIDUOUS SHRUB
TYPE SW-401 STORM MANHOLE	CONIFEROUS SHRUB
TYPE SW-402 STORM MANHOLE	ELECTRIC POWER POLE
FLARED END SECTION	GUY ANCHOR
TYPE SW-301 SANITARY MANHOLE	STREET LIGHT
STORM/SANITARY CLEANOUT	POWER POLE W/ TRANSFORMER
WATER VALVE	UTILITY POLE W/ LIGHT
FIRE HYDRANT ASSEMBLY	ELECTRIC BOX
SIGN	ELECTRIC TRANSFORMER
DETECTABLE WARNING PANEL	ELECTRIC MANHOLE OR VAULT
WATER CURB STOP	TRAFFIC SIGN
STORM SEWER STRUCTURE NO.	TELEPHONE JUNCTION BOX
STORM SEWER PIPE NO.	TELEPHONE MANHOLE/VAULT
SANITARY SEWER STRUCTURE NO.	TELEPHONE POLE
SANITARY SEWER PIPE NO.	GAS VALVE BOX
SANITARY SEWER	CABLE TV JUNCTION BOX
SANITARY SERVICE	CABLE TV MANHOLE/VAULT
STORM SEWER	MAIL BOX
STORM SERVICE	BENCHMARK
WATERMAIN WITH SIZE	SOIL BORING
WATER SERVICE	UNDERGROUND TV CABLE
SAWCUT (FULL DEPTH)	GAS MAIN
SILT FENCE	FIBER OPTIC
USE AS CONSTRUCTED	UNDERGROUND TELEPHONE
MINIMUM PROTECTION ELEVATION	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	FIELD TILE
	SANITARY SEWER W/ SIZE
	STORM SEWER W/ SIZE
	WATER MAIN W/ SIZE

OWNER / APPLICANT

KING'S GROVE, LLC
CONTACT: BRAD STANBROUGH
10888 HICKMAN ROAD, SUITE 3A
CLIVE, IOWA 50325
PH. (515) 202-3030

ENGINEER

CIVIL DESIGN ADVANTAGE
3405 SE CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PH. (515) 369-4400
FX. (515) 369-4410
CONTACT: ERIN OLLENDIKE
EMAIL: ERINO@CDA-ENG.COM

SURVEYOR

CIVIL DESIGN ADVANTAGE, LLC
CONTACT: CHARLIE MCLOTHLEN
3405 SE CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PH. (515) 369-4400
FX. (515) 369-4410

DATE OF SURVEY

JANUARY 23, 2018

BENCHMARKS

- CUT X AT THE SOUTHEAST CORNER OF S. 95TH STREET AND STAGECOACH DRIVE.
ELEVATION=106.96
- WDM BM #35 - NE CORNER OF INTERSECTION OF MILLS CIVIC PARKWAY & 88TH STREET, 206' EAST OF CENTERLINE OF SOUTH 88TH STREET, 49' NORTH OF THE CENTERLINE OF MILLS CIVIC PARKWAY.
ELEVATION=219.04
- WDM BM #37 - SOUTH 88TH STREET, ±2640' SOUTH OF MILLS CIVIC PARKWAY, 32' EAST OF CENTERLINE OF SOUTH 88TH STREET, NEAR THE 1/4 SECTION LINE, 1' WEST OF THE NORTH/SOUTH FENCE LINE.
ELEVATION=194.80

SUBMITTAL DATES

FIRST SUBMITTAL: 05/25/2018
SECOND SUBMITTAL: 07/06/2018
THIRD SUBMITTAL: 07/31/2018
FOURTH SUBMITTAL: 08/20/2018
FINAL SUBMITTAL: 09/24/2018

UTILITY WARNING

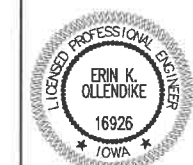
ANY UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY AND RECORDS OBTAINED BY THIS SURVEYOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL THE UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION SHOWN.



3405 SE CROSSROADS DR. SUITE G, GRIMES, IOWA 50111
PH: (515) 369-4400 Fax: (515) 369-4410
PROJECT NO. 1801.001



1-800-292-8989
www.iowaonecall.com



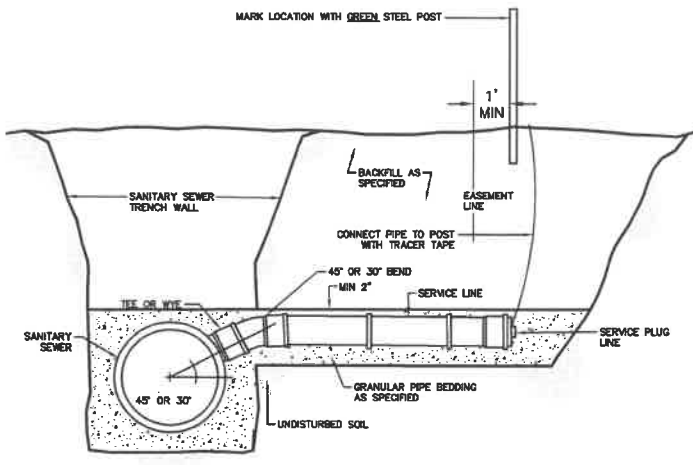
I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

Erin K. Ollendike 9/26/18
ERIN K. OLLENDIKE, P.E. DATE

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2019
PAGES OR SHEETS COVERED BY THIS SEAL:
SHEETS 1.0-7.1

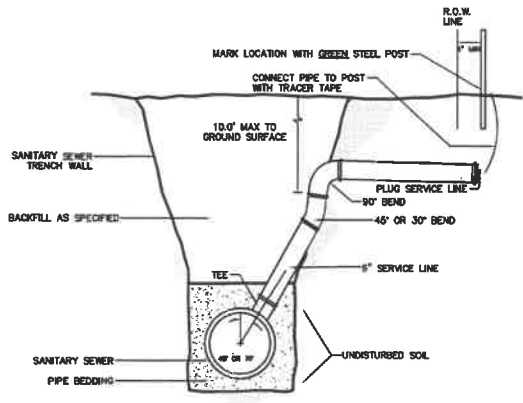
FILED IN VICTORIA/VICTORIA/PLANNING - SITE PLANNING DATE PLOTTED: 9/25/2018 @ 2:24 AM COMMENT: ERIN

KING'S GROVE TOWNHOMES



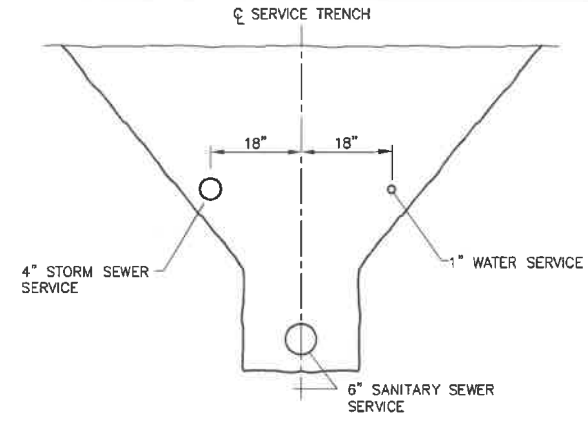
NOTE:
1. USE FOR SERVICE CONNECTION WHEN SANITARY SEWER DEPTH IS 12.0' OR LESS OR WHEN REQUIRED TO SERVE ADJACENT PROPERTY.

SANITARY SEWER SERVICE
NOT TO SCALE
CITY OF WEST DES MOINES DETAIL 4.5



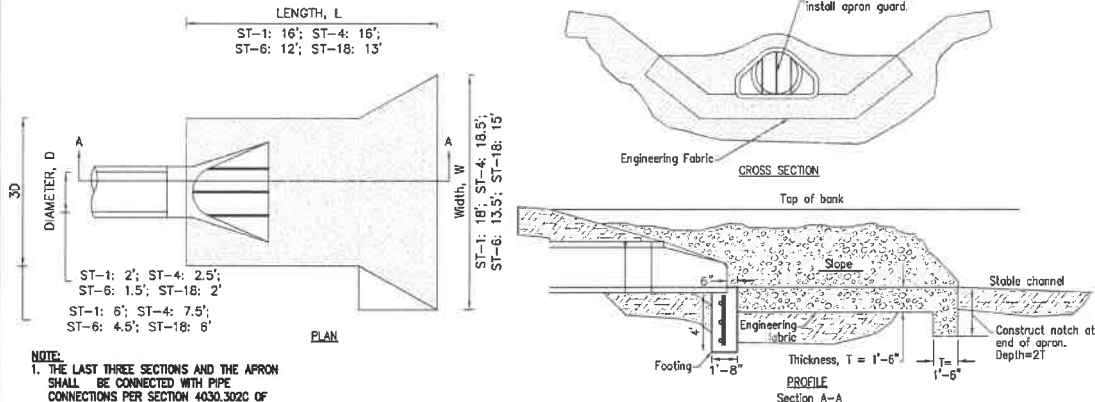
NOTE:
1. USE FOR SERVICE CONNECTION WHEN SANITARY SEWER DEPTH IS 12.0' OR UNLESS ADDITIONAL DEPTH IS NECESSARY TO SERVE ADJACENT PROPERTY.

SANITARY SEWER SERVICE RISER
NOT TO SCALE
CITY OF WEST DES MOINES DETAIL 4.6



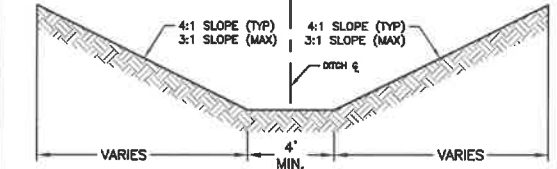
NOTE: EXTEND SANITARY AND STORM SERVICES A MINIMUM OF 1 FOOT BEYOND RIGHT OF WAY LINE PER WEST DES MOINES DETAIL 4.5 AND 5.15. WATER SERVICES NEED TO STOP 1 FOOT SHORT OF FUTURE SIDEWALK PER WEST DES MOINES WATER WORKS DETAIL 12. MARK ENDS OF SERVICES WITH STEEL POSTS. CONTRACTOR SHALL COORDINATE ALL SERVICE LINE CROSSINGS WITH MAIN UTILITIES.

TYPICAL SERVICE INSTALLATION DETAILS
NOT TO SCALE



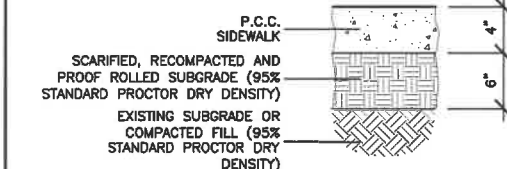
NOTE:
1. THE LAST THREE SECTIONS AND THE APRON SHALL BE CONNECTED WITH PIPE CONNECTIONS PER SECTION 4030.302C OF SUDAS.
2. INSTALL A 3" CLAY WATERSTOP AT ALL STORM SEWER OUTLETS.

ROCK APRON FOR PIPE OUTLET
NOT TO SCALE

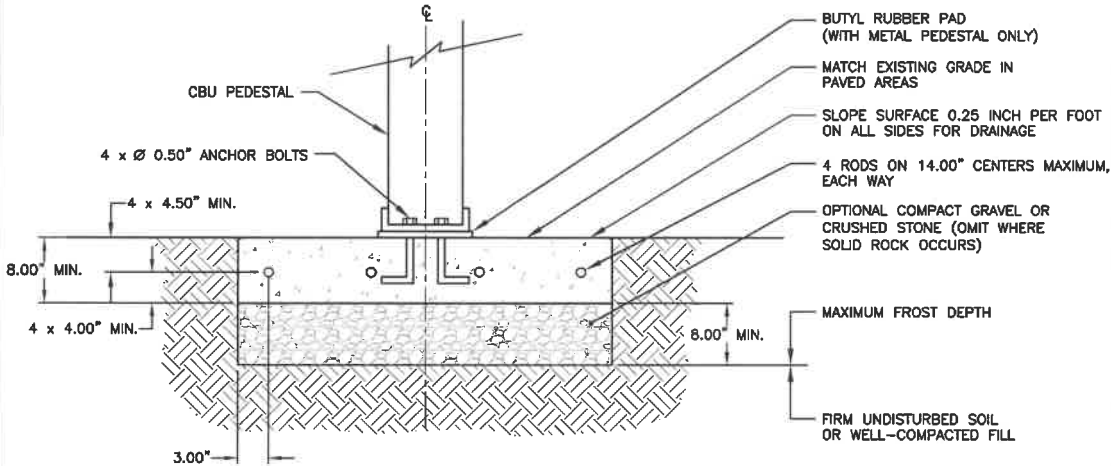
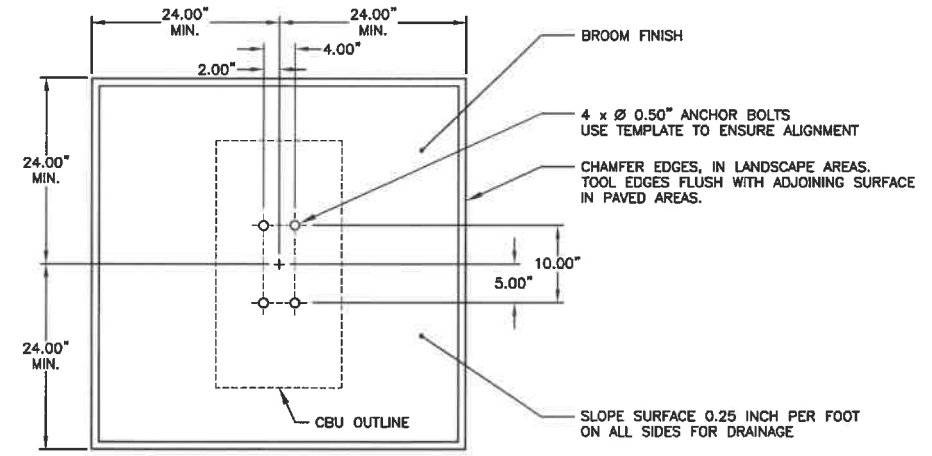


NOTE:
SEE SWPPP FOR EROSION CONTROLS AND STABILIZATION PRIOR TO SEEDING. SEED WITH TYPE 4 MIX (SUDAS).

TYPICAL SWALE DETAIL
NOT TO SCALE

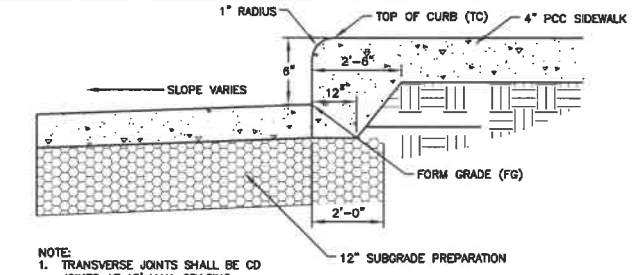
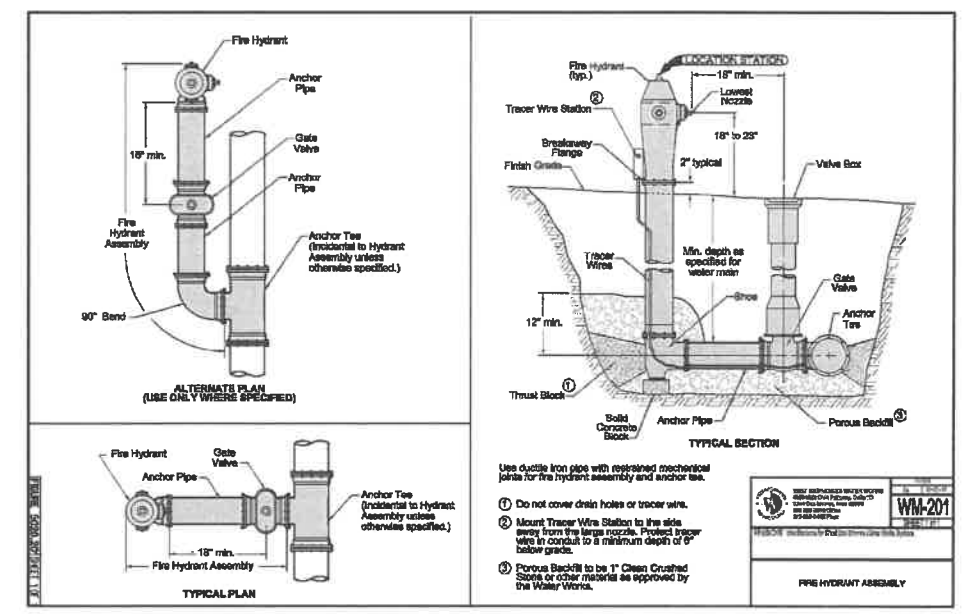


P.C.C. SIDEWALK DETAIL
NOT TO SCALE

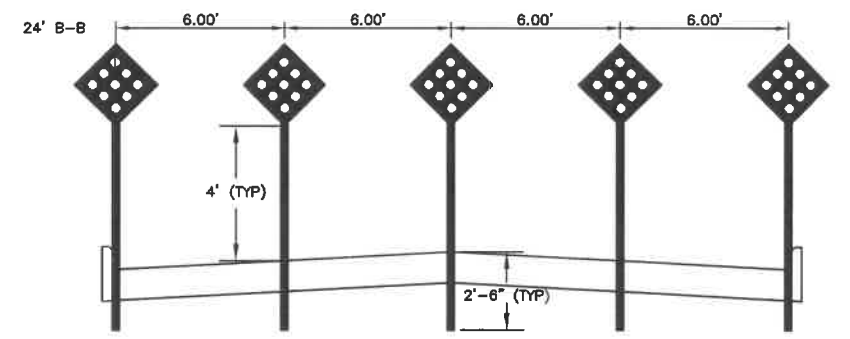


NOTES:
1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS, CONTAIN 4% MIN. - 6% MAX. AIR ENTRAINMENT AND BE PLACED WITH A 3.50" - 4.00" SLUMP IN ACCORDANCE WITH ACI 301.
2. REINFORCING STEEL RODS SHALL CONFORM TO ASTM A615, GRADE 60.
3. ANCHOR BOLTS SHALL CONFORM TO ASTM A193, GRADE 88M, TYPE 316 STAINLESS STEEL.

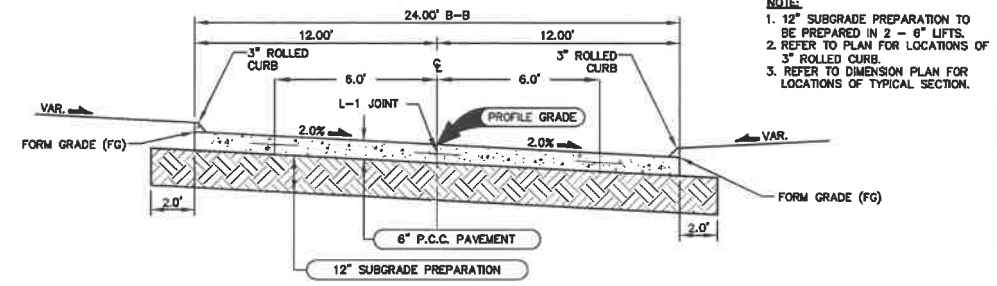
MAILBOX CLUSTER PAD DETAIL
NOT TO SCALE



CLASS A CURB & SIDEWALK
NOT TO SCALE



PERMANENT ROAD CLOSURE SIGN SPACING DETAIL
NOT TO SCALE
SI-182



TYPICAL SECTION - 24' P.C.C. ROADWAY
NOT TO SCALE

DATE: 08/24/18, 09/20/18, 07/25/18, 07/06/18, 05/25/18

REVISIONS: FINAL CITY SUBMITTAL, CITY SUBMITTAL #4, CITY SUBMITTAL #5, CITY SUBMITTAL #2, CITY SUBMITTAL #1

3405 S.E. CROSSROADS DRIVE, SUITE G, GRIMES, IOWA 50111, PHONE: (515) 369-4400, FAX: (515) 369-4410, ENGINEER: EKO, E.I.: GH

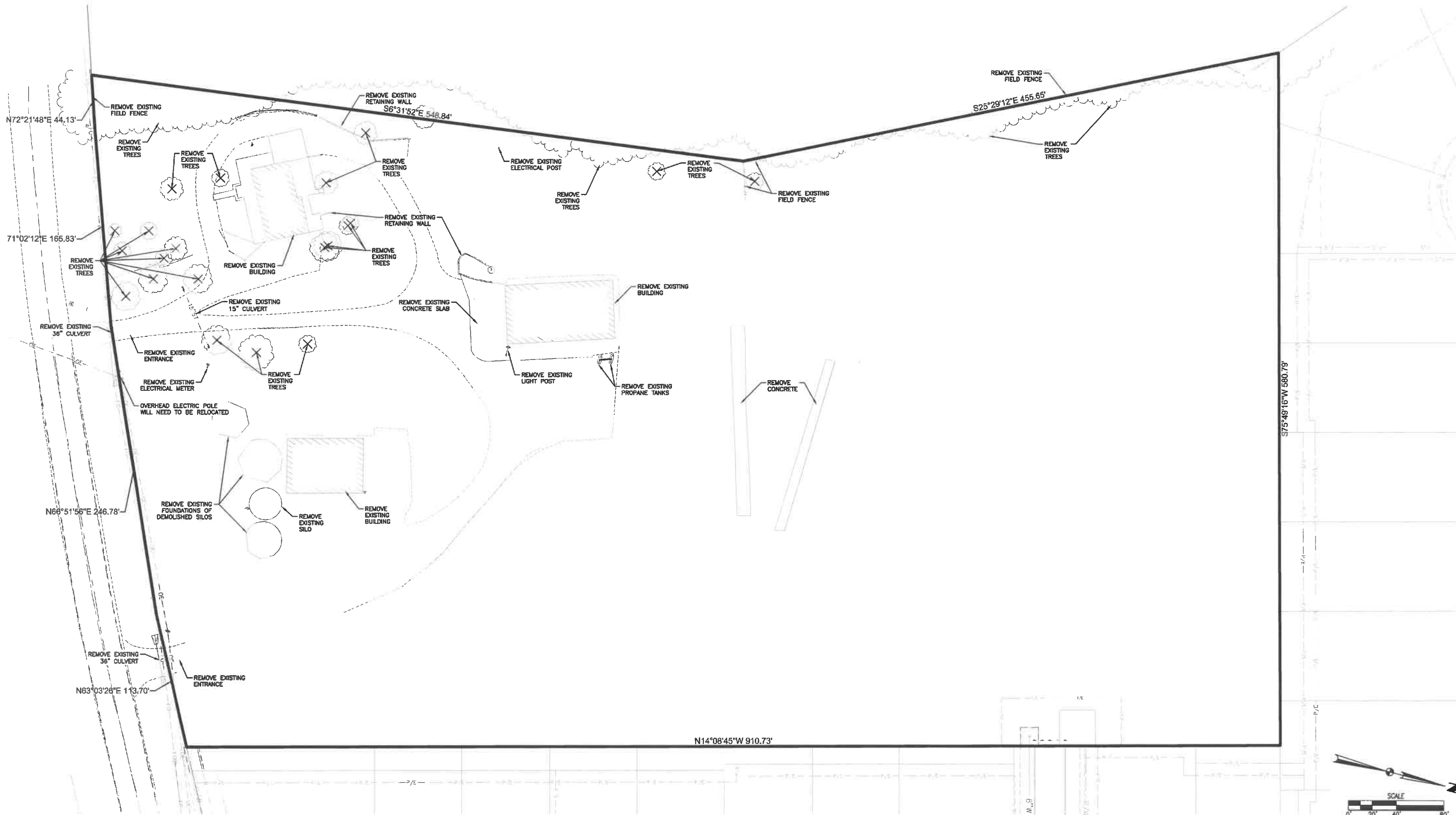
KING'S GROVE TOWNHOMES
WEST DES MOINES, IOWA

TYPICAL SECTIONS AND DETAILS
CIVIL DESIGN ADVANTAGE

2.0
1801.001

DEMOLITION NOTES

- PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER OR ENGINEER AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
- PRIOR TO DEMOLITION, CONTRACTOR SHALL NOTIFY IN WRITING (48 HRS NOTICE) THE FOLLOWING:
 - CITY
 - APPROPRIATE UTILITY COMPANIES
 - OWNER
 - CIVIL DESIGN ADVANTAGE
- DO NOT DISTURB EXISTING UTILITIES UNLESS OTHERWISE NOTED. COORDINATE REMOVAL OR ABANDONMENT OF ALL UTILITIES WITH THE APPROPRIATE UTILITY SUPPLIER AND REGULATORY AGENCIES. PROTECT EXISTING UTILITIES THAT ARE TO REMAIN. THE LOCATIONS OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLAN MAY BE PRESENT.
- BACKFILL ALL EXCAVATIONS WITH COHESIVE MATERIAL COMPACTED TO 95% MAXIMUM STANDARD PROCTOR DRY DENSITY AND MOISTURE RANGE OF OPTIMUM MOISTURE TO 4% ABOVE OPTIMUM MOISTURE. TESTING OF BACKFILL TO BE BY A GEOTECHNICAL ENGINEER EMPLOYED BY THE OWNER. IN THE EVENT OF A TEST FAILURE, ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR.
- FIELD VERIFY EXISTING GRADES AND LOCATION OF EXISTING UTILITIES, CONDUIT, LINES, POLES, TREES, PAVING, BUILDING AND OTHER SITE FEATURES PRIOR TO DEMOLITION AND IMMEDIATELY INFORM THE ENGINEER AND/OR OWNER OF ANY DISCREPANCIES.
- DEMOLITION NOTES AS SHOWN ON THE PLAN ARE NOT ALL INCLUSIVE. CONTRACTOR TO ABANDON IN PLACE OR REMOVE AND DISPOSE OF ALL EXISTING SITE IMPROVEMENTS ABOVE AND BELOW GROUND TO COMPLY WITH THE GENERAL INTENT OF THIS DOCUMENT.
- ALL CONSTRUCTION/DEMOLITION DEBRIS SHALL BE DISPOSED OF OFF-SITE IN FULL COMPLIANCE WITH CURRENT ENVIRONMENTAL REGULATIONS.
- CONSTRUCTION LIMITS SHALL BE CONFINED TO THE SITE BOUNDARY AS NOTED. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- ALL WORK SHALL BE IN ACCORDANCE WITH OSHA STANDARDS. NOTHING INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.



FILE: H:\XRAY\1801001\DWG\1801001-SITE PLAN.DWG DATE PLOTTED: 9/25/2018 8:23 AM
 PLOT BY: J. MURRAY
 COMMENT: 0/0

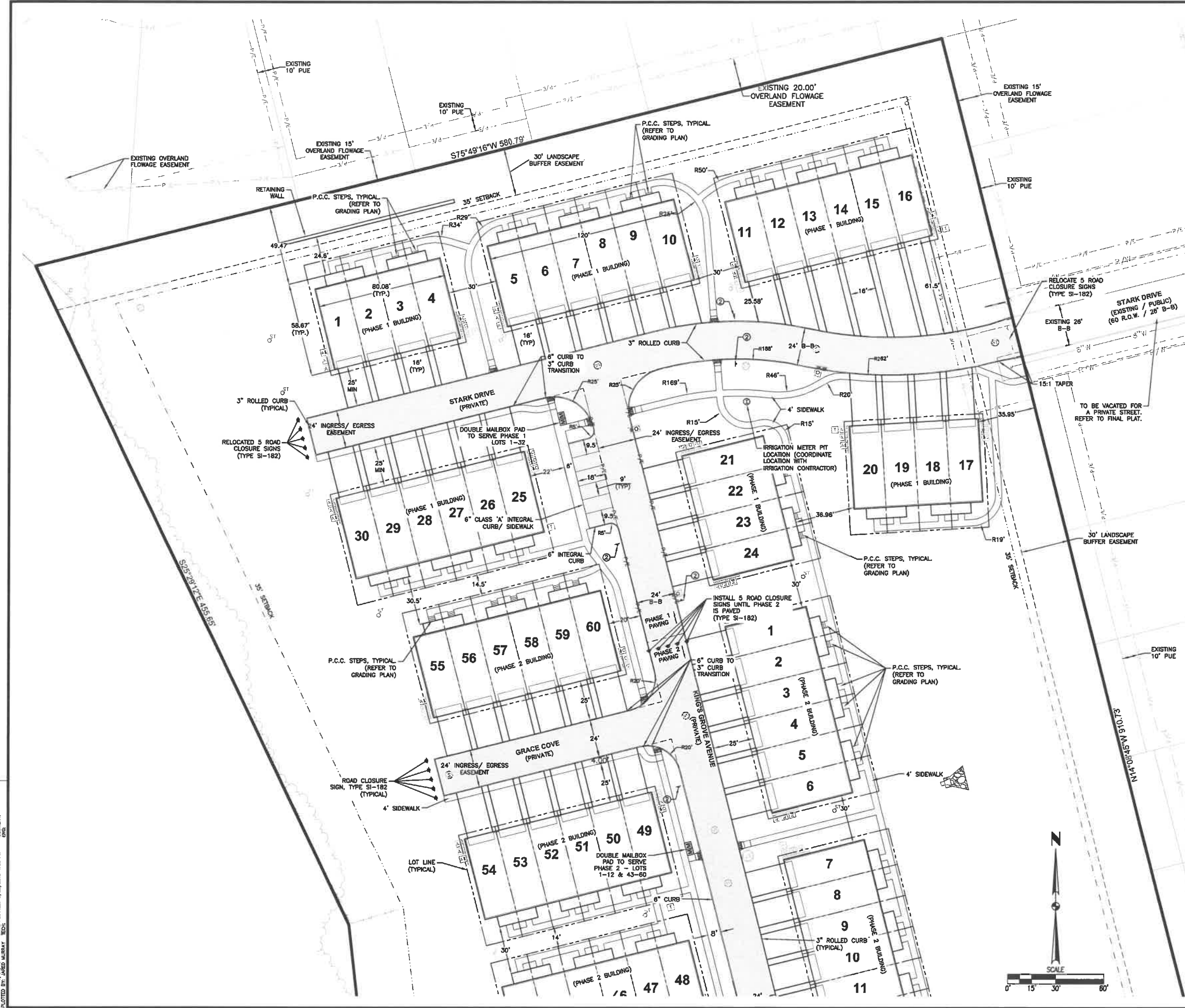
REVISIONS	DATE
CITY SUBMITTAL #1	05/25/18
CITY SUBMITTAL #2	07/06/18
CITY SUBMITTAL #3	07/27/18
CITY SUBMITTAL #4	08/20/18
FINAL CITY SUBMITTAL	09/24/18

3405 S.E. CROSSROADS DRIVE, SUITE G
 GRIMES, IOWA 50111
 PHONE: (515) 369-4400 FAX: (515) 369-4410
 ENGINEER: EKO EI: GH



KING'S GROVE TOWNHOMES
 WEST DES MOINES, IOWA
DEMOLITION PLAN

HED: H:\2018\1801001\1801001-SITE PLANNING
 DATE: 9/25/18
 DATE PLOTTED: 9/25/2018 4:30 PM
 PLOTTED BY: ANDREW MURRAY



GENERAL NOTES

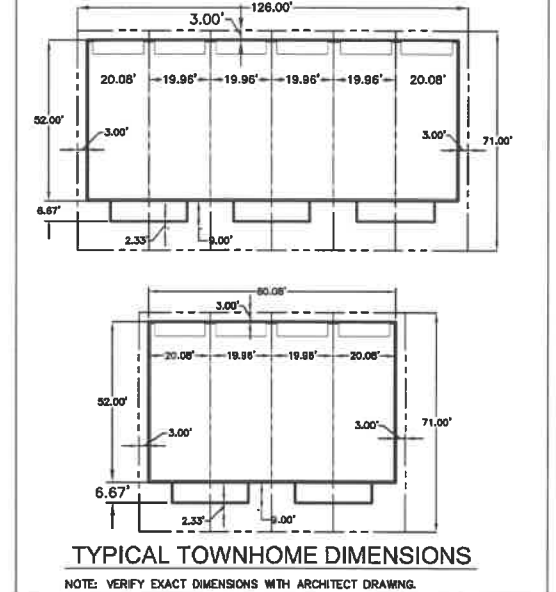
- THE MOST RECENT EDITION OF THE WEST DES MOINES STANDARDS FOR SUBDIVISIONS AND THE WEST DES MOINES WATER WORKS STANDARD SPECIFICATIONS FOR SUBDIVISIONS SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
- ALL WORK SHALL COMPLY WITH ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.
- ALL WORK SHALL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.
- PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER, ENGINEER, AND/OR ARCHITECT, AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
- AT LEAST ONE WEEK PRIOR TO ANY CONSTRUCTION WITHIN PUBLIC R.O.W./EASEMENTS AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, THE CONTRACTOR SHALL CONTACT ENGINEERING SERVICES (222-3478) TO OBTAIN APPLICABLE CITY PERMITS THAT MAY BE NECESSARY.
- ALL CONSTRUCTION WITHIN PUBLIC R.O.W./EASEMENTS, AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, SHALL COMPLY WITH THE WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATIONS FOR SUBDIVISIONS, DSM METRO DESIGN STANDARDS AND WDM ADDENDUMS.
- ALL DIMENSIONS ARE TO BACK OF CURB, BUILDING FACE OR PROPERTY LINE UNLESS OTHERWISE NOTED.
- CONTRACTOR TO VERIFY BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.
- PLACE 1 INCH EXPANSION JOINT BETWEEN ALL P.C.C. PAVEMENT/SIDEWALKS AND BUILDING. PLACE 1/2 INCH EXPANSION JOINT BETWEEN SIDEWALKS AND P.C.C. PAVEMENT.
- ALL DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY.
- ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
- DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE RIGHT OF WAY.
- CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
- CONTRACTOR MAY BE REQUIRED TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY, AS DIRECTED BY THE ENGINEER OR THE CITY.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK BETWEEN SUPPLIERS AND SUBCONTRACTORS INVOLVED IN THE PROJECT, INCLUDING STAGING OF CONSTRUCTION DETAILS.
- ALL PERMITS AND ADDITIONAL FEES REQUIRED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACTOR BID.
- TRASH FOR THE BUILDING INTERNAL OR IN LOADING AREA AND SCREENED BY EXISTING WALL.
- THE MONUMENT SIGNS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. SIGNS ARE NOT APPROVED AS PART OF THE SITE PLAN REVIEW.
- INDIVIDUAL GARBAGE TOTES ARE TO BE USED AND STORED IN GARAGE.

TRAFFIC CONTROL NOTES

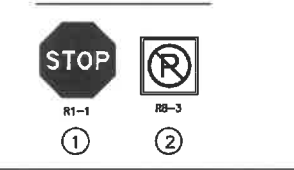
- ALL APPLICABLE CITY PERMITS, INCLUDING BUT NOT LIMITED TO CLOSURE PERMITS, SHALL BE OBTAINED PRIOR TO ANY CONSTRUCTION WITHIN CITY R.O.W. OR LAKE CLOSURES.
- ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- PERMANENT SIGNING THAT CONVEYS A MESSAGE CONTRARY TO THE MESSAGE OF TEMPORARY SIGNING AND NOT APPLICABLE TO THE WORKING CONDITIONS SHALL BE COVERED BY THE CONTRACTOR WHEN DIRECTED BY THE CITY.
- THE CONTRACTOR SHALL COORDINATE HIS TRAFFIC CONTROL WITH OTHER CONSTRUCTION PROJECTS IN THE AREA.
- SIDEWALK / PATH CLOSED SIGNS REQUIRED FOR ALL SIDEWALK CLOSURES. SIGNAGE AND TEMPORARY PEDESTRIAN ROUTE THROUGH CONSTRUCTION AREA SHALL MEET THE REQUIREMENTS OF PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG), SECTION 2205 AND IOWA DOT DESIGN MANUAL, CHAPTER 12A-4.
- THE CONTRACTOR IS CAUTIONED NEITHER TO OBSTRUCT NOR REMOVE ANY EXISTING PAVEMENT, NOR TO DISTURB THE EXISTING TRAFFIC PATTERNS MORE THAN IS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.
- ALL SIGNING, STRIPING AND OTHER TRAFFIC CONTROL DEVICES ON THE DRIVEWAY APPROACHES TO THE PUBLIC STREETS SHOULD CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FEDERAL HIGHWAY ADMINISTRATION 2009 EDITION).

PAVEMENT THICKNESS (NON-REINFORCED)

- | | |
|-------------------|-----------|
| 1. SIDEWALKS | 4" P.C.C. |
| 2. PRIVATE DRIVES | 7" P.C.C. |
| 3. PARKING SPACES | 6" P.C.C. |



SIGN LEGEND



DATE
 09/24/18
 09/20/18
 07/25/18
 07/06/18
 05/25/18

REVISIONS
 FINAL CITY SUBMITTAL
 CITY SUBMITTAL #4
 CITY SUBMITTAL #3
 CITY SUBMITTAL #2
 CITY SUBMITTAL #1

3405 S.E. CROSSROADS DRIVE, SUITE G
 GRIMES, IOWA 50111
 PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO
EI: GH

CIVIL DESIGN ADVANTAGE
 WEST DES MOINES, IOWA

KING'S GROVE TOWNHOMES
DIMENSION PLAN

4.0
 1801.001

FILE: N:\WORK\1801\1801-1801-SITE PLAN.DWG
 DATE: 08/24/18
 DRAWN BY: J. MURRAY
 CHECKED BY: J. MURRAY
 PLOTTED: 8/25/2018 8:25 AM



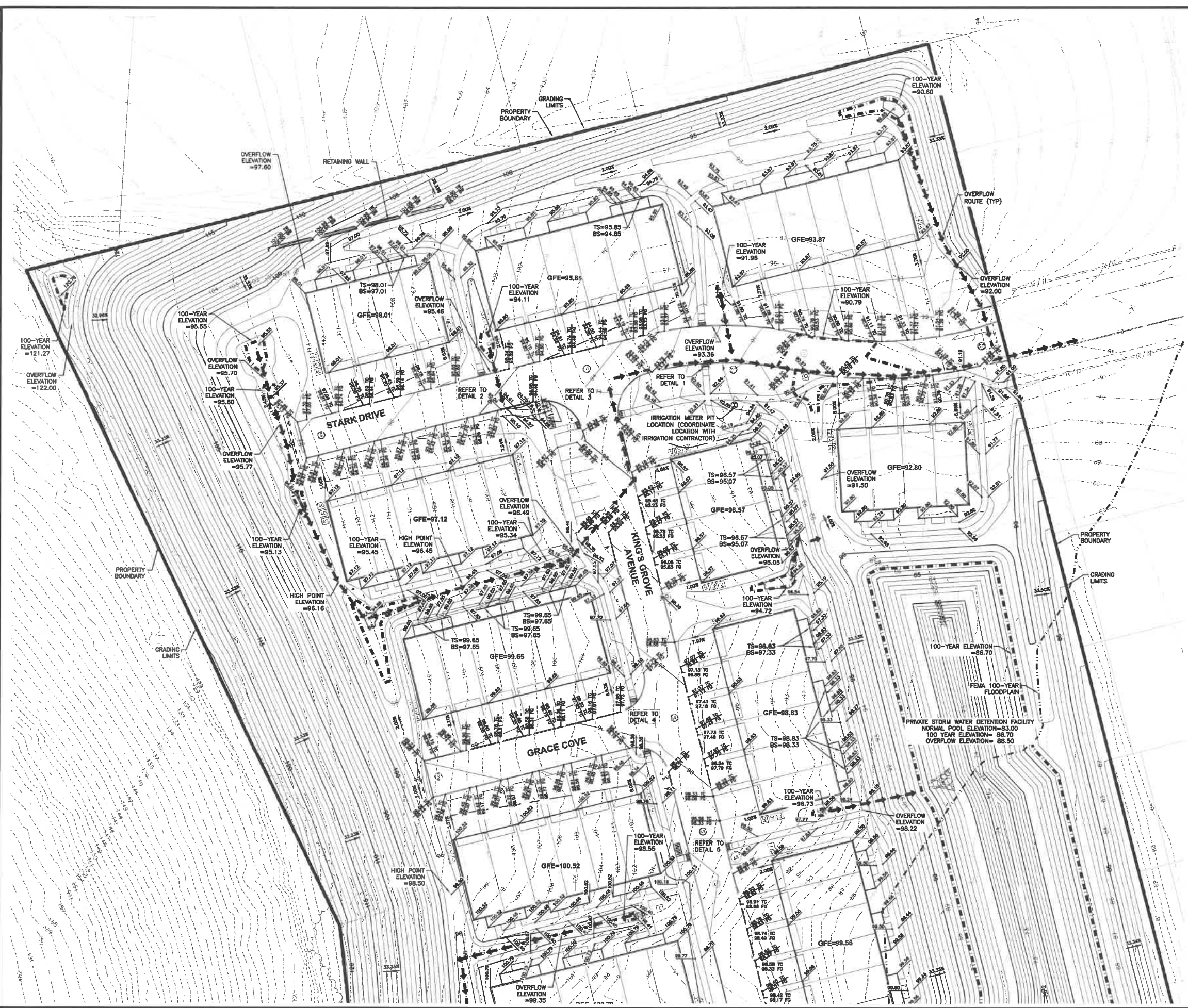
REVISIONS	DATE
FINAL CITY SUBMITTAL	08/24/18
CITY SUBMITTAL #4	08/20/18
CITY SUBMITTAL #3	07/31/18
CITY SUBMITTAL #2	07/09/18
CITY SUBMITTAL #1	05/25/18

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KING'S GROVE TOWNHOMES
DIMENSION PLAN

FILE: K:\JOB\1801\1801\1801-SITE PLAN.DWG DATE PLOTTED: 9/25/2018 8:22 AM
 PLOT DATE: 9/25/2018 PLOT BY: JAWAY
 COMMENT: SEE SHEET 5.0 FOR GRADING PLAN

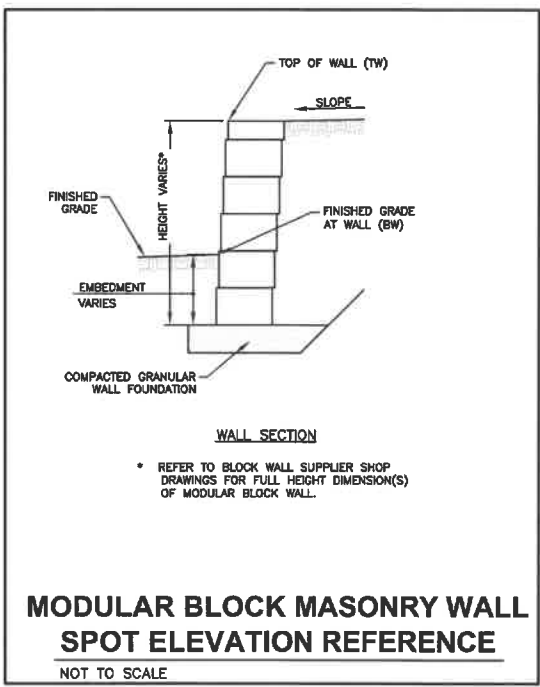


GRADING NOTES

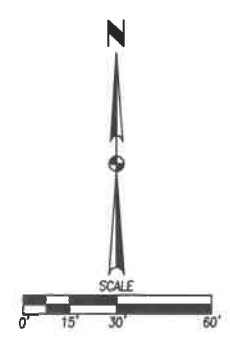
- CONTRACTOR SHALL STRIP ALL DELETERIOUS MATERIAL THE TOP 6" OF TOPSOIL IS TO BE STOCKPILED AND RESPREAD AFTER GRADING IS COMPLETE. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING A SUITABLE TOPSOIL STOCKPILE SITE.
- MATCH EXISTING GRADES AT PROPERTY LINES AND/OR CONSTRUCTION LIMITS.
- ALL SPOT ELEVATIONS ARE FORM GRADE (FG) OR TOP-OF-CURB (TC) UNLESS OTHERWISE NOTED.
- SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS.
- ALL SIDEWALK CROSS SLOPES SHALL BE A MAXIMUM OF 2.00%.
- SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
- THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAIL ROADS TO PREVENT THE SPREAD OF DUST.
- REFER TO SEPARATE STORM WATER POLLUTION PREVENTION PLAN FOR DETAILS ON EROSION CONTROL.
- FINAL FINISH GRADING TO BE APPROVED BY THE ARCHITECT AND CIVIL ENGINEER. MATCH EXISTING GRADES AT THE INTERFACE OF NEW AND EXISTING GRADES OR PAVING.
- SIDEWALKS: MAINTAIN A 5.0% MAXIMUM LONGITUDINAL SLOPES ON ALL PAVED WALKWAYS. ALL WALKS TO HAVE 1.5% TRANSVERSE SLOPE IN THE DIRECTION OF NATURAL DRAINAGE. SAW CUT JOINTS AS SOON AS CONCRETE HAS SET. SAW CUTS TO BE 1/8" TO 1/4" WIDE; DEPTH: LONGITUDINAL T/3, TRANSVERSE T/4.

LEGEND:

- STORM WATER OVERFLOW ROUTE → → → →
- G.F.E. = FINISHED GRADE AT THE FRONT OF THE GARAGE. REFER TO ARCHITECTURAL DRAWINGS FOR ANY ELEVATION CHANGE WITHIN THE BUILDING.
- F.F.E. = FINISHED FLOOR ELEVATION
- TS = TOP OF STEPS
- BS = BOTTOM OF STEPS
- TW = TOP OF WALL
- BW = FINISHED GRADE AT BOTTOM OF WALL



MODULAR BLOCK MASONRY WALL SPOT ELEVATION REFERENCE
 NOT TO SCALE



DATE	REVISIONS
09/24/18	FINAL CITY SUBMITTAL
09/20/18	CITY SUBMITTAL #4
07/27/18	CITY SUBMITTAL #2
07/06/18	CITY SUBMITTAL #1
05/25/18	

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WEST DES MOINES, IOWA
ENGINEER: EKO
 EI: GH

KING'S GROVE TOWNHOMES
GRADING PLAN

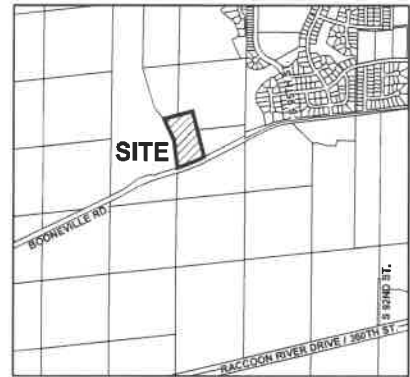
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KING'S GROVE TOWNHOMES

EROSION AND SEDIMENT CONTROL PLAN

VICINITY MAP

NOT TO SCALE



WEST DES MOINES, IOWA

STABILIZATION QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	5,125
2	SEEDING, FERTILIZING, AND MULCHING	AC	7.45
3	INLET PROTECTION DEVICES	EA	9
4	CONCRETE WASHOUT PIT	EA	1
5	12" PVC OR HDPE STANDPIPE	EA	1
6	TYPE 1 TURF REINFORCEMENT MAT	SY	4,000

SWPPP LEGEND

- DRAINAGE ARROW X.XX %
- GRADING LIMITS
- FILTER SOCK
- SILT FENCE
- DITCH CHECK
- INLET PROTECTION
- PORTABLE RESTROOM
- TEMPORARY STANDPIPE
- CONCRETE WASHOUT PIT
- UNDISTURBED AREA
- RIP-RAP
- GRAVEL ENTRANCE
- STAGING AREA
- TEMPORARY SEDIMENT BASIN
- TURF REINFORCEMENT MAT

DISCHARGE POINT SUMMARY

DISCHARGE POINT #1 TO SUGAR CREEK ±1100 FT	12.14 ACRES
TOTAL AREA DISTURBED TO DISCHARGE POINT	43,704 CU FT
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)	
VOLUME PROVIDED IN SILT FENCE (5,125 LF @ 4.5 CU FT/LF OF FENCE)	23,062 CU FT
VOLUME PROVIDED IN TSB #1	174,024 CU FT
TOTAL VOLUME PROVIDED	197,086 CU FT



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 PLOTTER: HP DesignJet 5000 Series
 COMMENT:

REVISIONS	DATE
FINAL CITY SUBMITTAL	09/24/16
CITY SUBMITTAL #4	09/20/16
CITY SUBMITTAL #3	07/31/16
CITY SUBMITTAL #2	07/09/16
CITY SUBMITTAL #1	05/25/16

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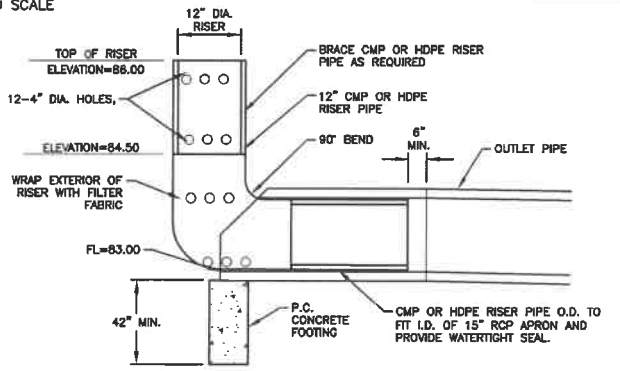


KING'S GROVE TOWNHOMES
 EROSION AND SEDIMENT CONTROL PLAN
 WEST DES MOINES, IOWA

FILE: K:\2014\1000\10001-SWPPP.DWG
 DATE PLOTTED: 8/17/10 8:25 AM
 PLOTTED BY: JAND MURRAY

TEMPORARY STAND PIPE DETAIL

NOT TO SCALE



INSTALL 31,000 SF OF
 TEMPORARY TYPE I
 TURF REINFORCEMENT MAT

UNDISTURBED
 AREA

UNDISTURBED
 AREA

UNDISTURBED
 AREA

UNDISTURBED
 AREA

UNDISTURBED
 AREA



REVISIONS	DATE
FINAL CITY SUBMITTAL	08/24/10
CITY SUBMITTAL #4	09/20/10
CITY SUBMITTAL #3	07/31/10
CITY SUBMITTAL #2	07/06/10
CITY SUBMITTAL #1	05/25/10

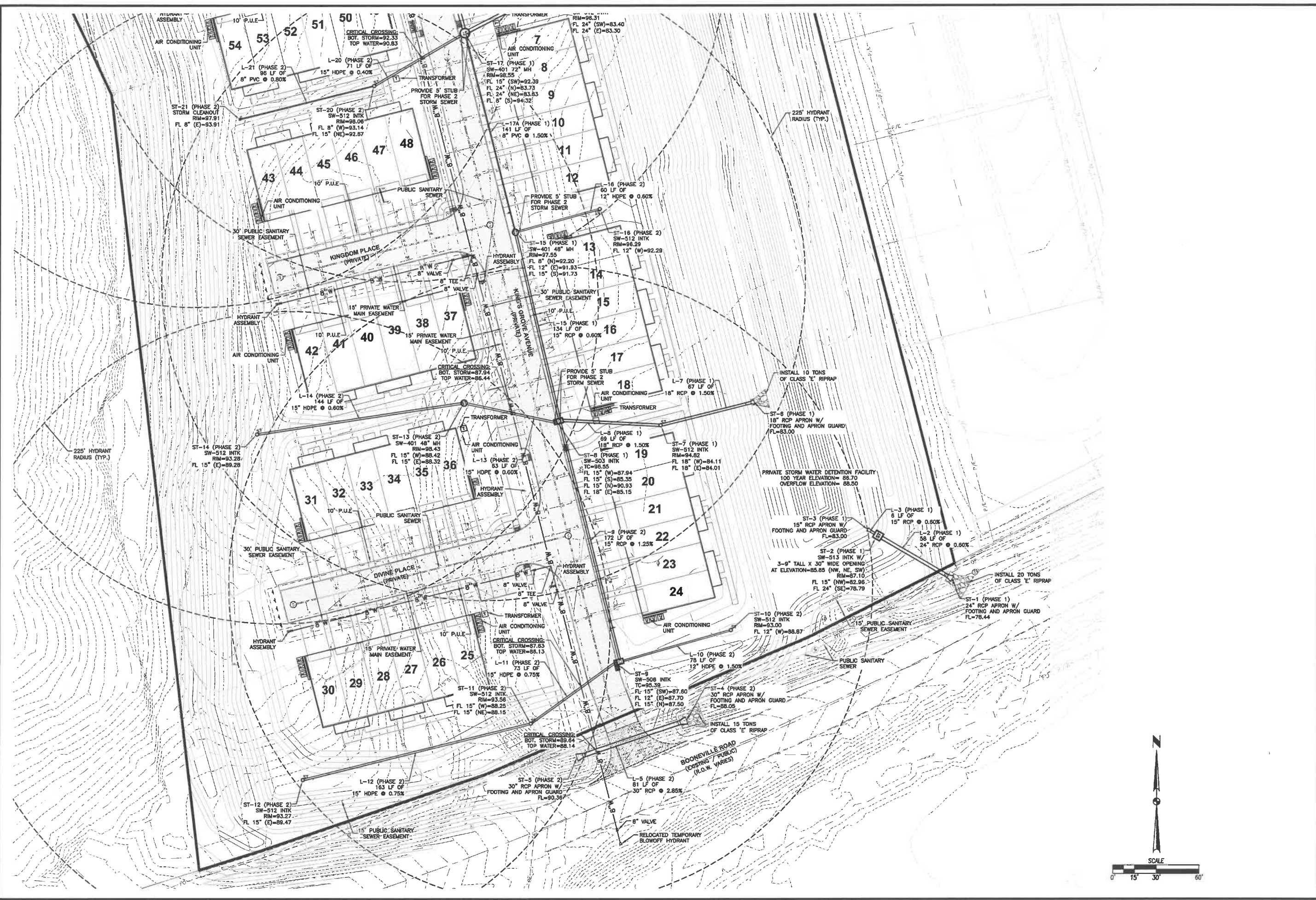
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CIVIL DESIGN ADVANTAGE
 WEST DES MOINES, IOWA

KING'S GROVE TOWNHOMES
EROSION AND SEDIMENT CONTROL PLAN

FILE: K:\PROJECTS\2018\1801\1801-01-SITE PLAN.DWG
 DATE: 9/27/18
 DATE PLOTTED: 9/25/2018 8:29 AM
 PLOTTED BY: JESSIE MURRAY, ESS



DATE	REVISIONS
09/20/18	FINAL CITY SUBMITTAL
08/20/18	CITY SUBMITTAL #4
07/31/18	CITY SUBMITTAL #3
07/06/18	CITY SUBMITTAL #2
05/25/18	CITY SUBMITTAL #1

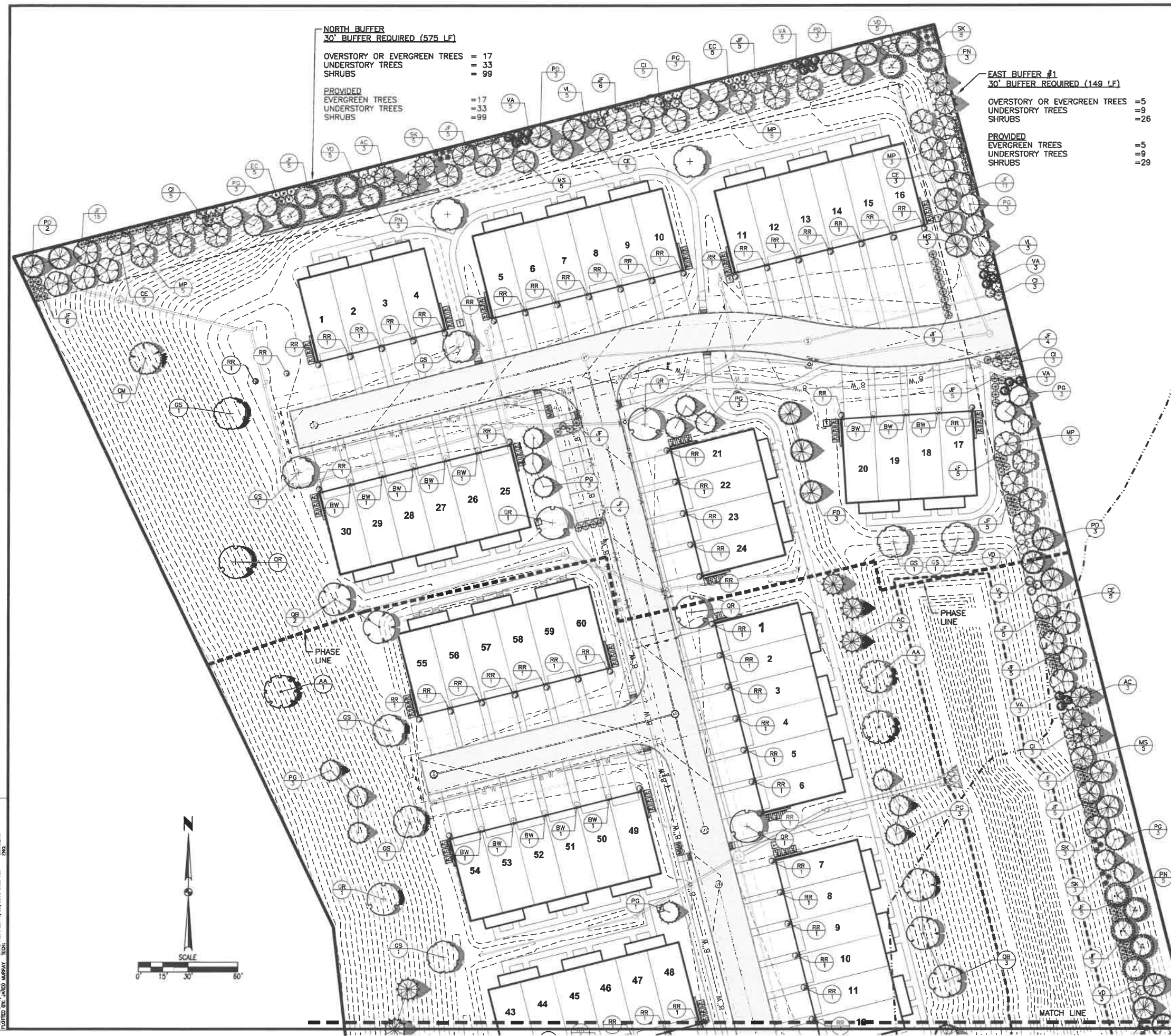
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 ENGINEER: EKO
 EI: GH



WEST DES MOINES, IOWA

KING'S GROVE TOWNHOMES UTILITY PLAN

FILE: N:\000\000000\000000\LANDSCAPE.DWG
 DATE PLOTTED: 9/25/2018 8:28 AM
 PLOTTED BY: JARED MORRIS



NORTH BUFFER
 30' BUFFER REQUIRED (575 LF)

OVERSTORY OR EVERGREEN TREES = 17
 UNDERSTORY TREES = 33
 SHRUBS = 99

PROVIDED
 EVERGREEN TREES = 17
 UNDERSTORY TREES = 33
 SHRUBS = 99

EAST BUFFER #1
 30' BUFFER REQUIRED (149 LF)

OVERSTORY OR EVERGREEN TREES = 5
 UNDERSTORY TREES = 9
 SHRUBS = 26

PROVIDED
 EVERGREEN TREES = 5
 UNDERSTORY TREES = 9
 SHRUBS = 29

LANDSCAPE NOTES

- LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
- ALL CONSTRUCTION SHALL CONFORM TO THE MOST RECENT EDITION OF THE WEST DES MOINES STANDARDS FOR SUBDIVISIONS.
- TYPE, SIZE, AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1
- ALL PLANT MATERIAL SHALL BE HEALTHY SPECIMENS WITHOUT DEFORMITIES, VOIDS AND OPEN SPACES, WITH WELL DEVELOPED BRANCH AND ROOT SYSTEMS; TRUE TO HEIGHT, SHAPE AND CHARACTER OF GROWTH OF THE SPECIES OR VARIETY.
- SOD ALL AREAS ADJACENT TO BUILDINGS, SEED (TYPE 1) OR SOD ALL OTHER DISTURBED AREAS AS DIRECTED BY OWNER.
- BACKFILL TO TOP OF CURB, (MINUS 1 1/2" FOR SOD, IF REQ.)
- WEED PREVENTER(PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING IN ALL PLANTING BEDS PER MANUFACTURER'S RECOMMENDATIONS.
- SHREDDED HARDWOOD MULCH SHALL BE PLACED AROUND ALL TREES, SHRUBS AND IN ALL PLANTING BEDS TO A (MIN) DEPTH OF 3". ALL GROUPS OF MORE THAN ONE SHRUB SHALL BE MULCHED IN A CONTINUOUS BED.
- ALL EDGING SHALL BE 3/16" STEEL EDGING.
- PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY, THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
- ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY.
- CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.
- CONTRACTOR SHALL PROVIDE IRRIGATION DESIGN TO OWNER FOR APPROVAL.
- NO OVERSTORY TREES SHALL BE PLANTED IN ANY CITY OF WEST DES MOINES PUBLIC UTILITY EASEMENT.

SCREENING

ALL MECHANICAL UNITS VISIBLE FROM A PUBLIC STREET SHALL BE SCREENED FROM PUBLIC VIEW.

VIEWS OF OFF STREET PARKING AREAS FROM PUBLIC RIGHTS OF WAY SHALL BE SCREENED TO A HEIGHT OF AT LEAST THREE FEET

PROVIDED: A 30' LANDSCAPE BUFFER FROM ALL PUBLIC VIEWS.

MINIMUM PLANT SIZES

DECIDUOUS OVERSTORY TREES	= 2" CAL
DECIDUOUS OVERSTORY TREES (CLUMP)	= 1" CAL
EVERGREEN TREES	= 6" HEIGHT
ORNAMENTAL TREES	= 1.5" CAL
DECIDUOUS SHRUBS (5'+)	= 36" HEIGHT
DECIDUOUS SHRUBS (3'-5')	= 24" HEIGHT
DECIDUOUS SHRUBS (0-3')	= 15" HEIGHT

30' BUFFER REQUIREMENTS

- A LANDSCAPED AND BERMED AREA OF NOT LESS THAN THIRTY FEET (30') IN WIDTH COMPRISED OF LANDSCAPE PLANTINGS.
- THE EQUIVALENT OF ONE OVERSTORY TREE OR UPRIGHT EVERGREEN TREE, TWO (2) UNDERSTORY TREES AND SIX (6) SHRUBS SHALL BE PROVIDED PER THIRTY FIVE (35) LINEAR FEET OF THE BUFFER PARK.

PLANT SUBSTITUTIONS

- (2) ORNAMENTAL TREES = (1) OVERSTORY TREE OR EVERGREEN
- (10) SHRUBS = (1) UNDERSTORY TREE
- NO MORE THAN 50% OF THE REQUIRED PLANT TYPE MAY BE SUBSTITUTED.
- AT LEAST 35% OF TREES REQUIRED ON SITE (SUM OF OPEN SPACE, BUFFER AND PARKING LOT TREES) SHALL BE EVERGREEN.
- TOTAL TREES = 250
- EVERGREENS REQUIRED = 91 (36%)
- EVERGREENS PROVIDED = 99 (39%)

OPEN SPACE LANDSCAPE REQUIREMENTS

- (2) TREES PER 3000 SF OF REQUIRED OPEN SPACE
- (3) SHRUBS PER 3000 SF OF REQUIRED OPEN SPACE
- SITE AREA = 508,620 SF
- OPEN SPACE REQUIRED = 127,158 SF (25%)
- OPEN SPACE PROVIDED = 321,994 SF (63%)
- TREES REQUIRED = 85
- TREES PROVIDED = 88
- SHRUBS REQUIRED = 128
- SHRUBS PROVIDED = 135

NORTH BUFFER PLANT SCHEDULE

TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE	CAL
AC	3	White Fir	Abies concolor	B&B	6"
CE	10	Eastern Redbud Multi-trunk	Coralis canadensis	B&B	1.1"
MP	10	Prairie Fire Crab Apple	Malus x 'Prairie Fire'	B&B	1.1"
MS	5	Spring Snow Crab Apple	Malus x 'Spring Snow'	B&B	1.1"
PG	6	Colorado Blue Spruce	Picea pungens 'Glauco'	B&B	6"
PN	8	Newport Flowering Plum	Prunus cerasifera 'Newport'	B&B	1.1"
PD	8	Douglas Fir	Pseudotsuga menziesii	B&B	6"

SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONT
CI	10	Small Redosier Dogwood	Cornus sericea 'santini'	36" HT.
EC	10	Compact Burning Bush	Euonymus alatus 'Compactus'	24" HT.
JF	41	Sea Green Juniper	Juniperus chinensis 'Sea Green'	24" HT.
SK	13	Miss Kim Korean Lilac	Syringa pubescens 'Miss Kim'	24" HT.
VB	10	Arrowwood Viburnum	Viburnum dentatum 'Arrowwood'	36" HT.
VL	5	Honeysuckle	Viburnum lentago	36" HT.
VA	10	American Cranberrybush	Viburnum trilobum	36" HT.

EAST BUFFER #1 PLANT SCHEDULE

TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE	CAL
AC	2	White Fir	Abies concolor	B&B	6"
CE	3	Eastern Redbud Multi-trunk	Coralis canadensis	B&B	1.5"
MP	3	Prairie Fire Crab Apple	Malus x 'Prairie Fire'	B&B	1.5"
MS	3	Spring Snow Crab Apple	Malus x 'Spring Snow'	B&B	1.5"
PG	3	Colorado Blue Spruce	Picea pungens 'Glauco'	B&B	6"

SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONT
CI	3	Small Redosier Dogwood	Cornus sericea 'santini'	36" HT.
JF	11	Sea Green Juniper	Juniperus chinensis 'Sea Green'	24" HT.
VL	3	Honeysuckle	Viburnum lentago	36" HT.
VA	3	American Cranberrybush	Viburnum trilobum	36" HT.

GA

DATE	09/24/18
FINAL CITY SUBMITTAL	09/20/18
CITY SUBMITTAL #4	07/31/18
CITY SUBMITTAL #3	07/06/18
CITY SUBMITTAL #2	05/25/18

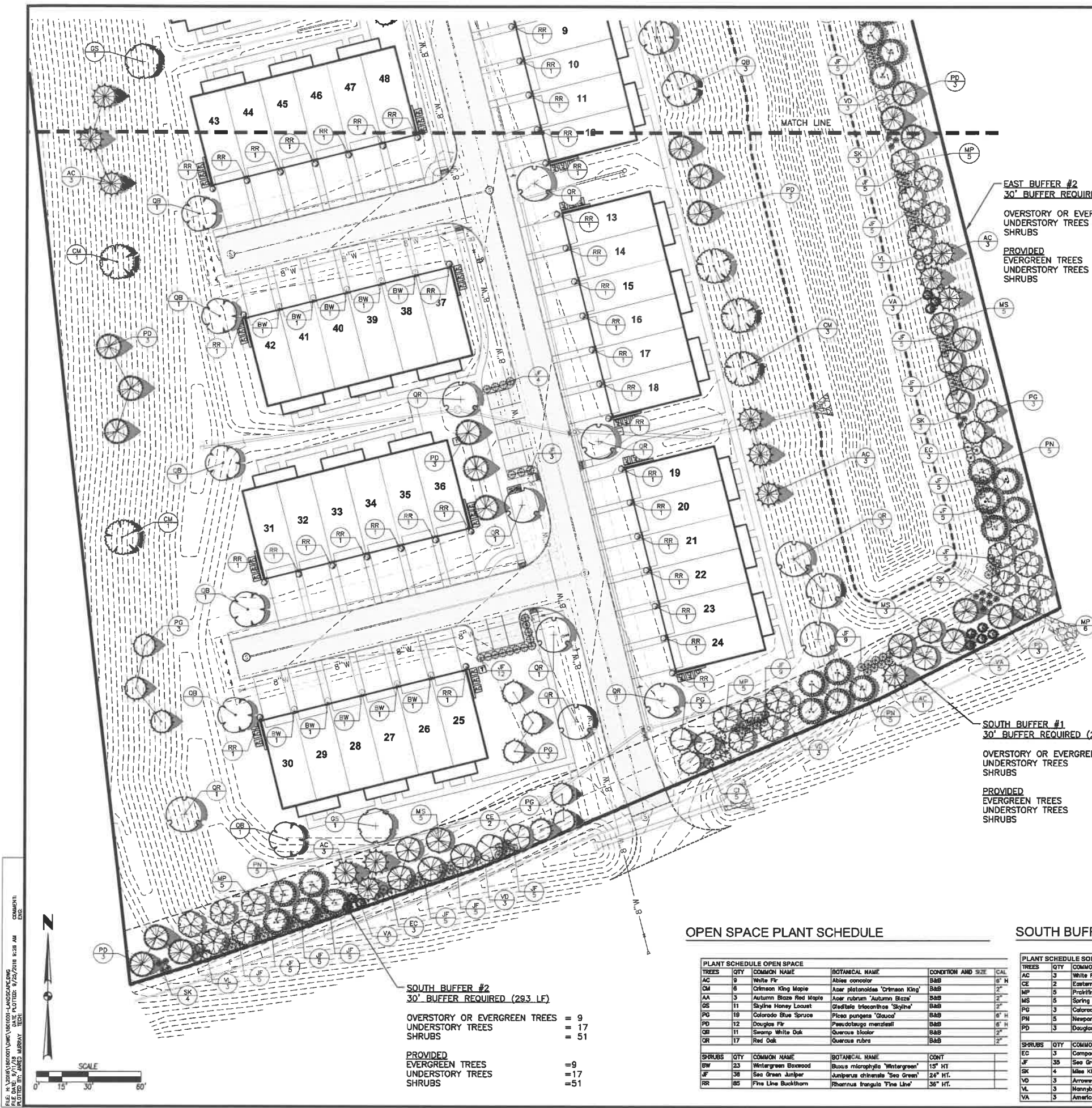
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GA
 CIVIL DESIGN ADVANTAGE
 WEST DES MOINES, IOWA

KING'S GROVE TOWNHOMES
LANDSCAPE PLAN

ENGINEER: EKO
 EI: GH

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EAST BUFFER #2 PLANT SCHEDULE

TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE	CAL
AC	6	White Fir	Abies concolor	B&B	6"
CE	5	Eastern Redbud Multi-trunk	Cercis canadensis	B&B	1.5"
MP	16	Prairie Fire Crab Apple	Malus x 'Prairie Fire'	B&B	1.5"
MS	10	Spring Snow Crab Apple	Malus x 'Spring Snow'	B&B	1.5"
PG	9	Colorado Blue Spruce	Picea pungens 'Glauca'	B&B	6"
PN	10	Newport Flowering Plum	Prunus caroliniana 'Newport'	B&B	1.5"
PD	6	Douglas Fir	Pseudotsuga menziesii	B&B	6"

SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONT
CI	6	Isanti Redstart Dogwood	Cornus sericea 'Isanti'	36" HT.
EC	3	Compact Burning Bush	Euonymus alatus 'Compactus'	24" HT.
JF	82	Sea Green Juniper	Juniperus chinensis 'Sea Green'	24" HT.
SK	12	Miss Kim Korean Lilac	Syringa pubescens 'Miss Kim'	24" HT.
VD	6	Arrowwood Viburnum	Viburnum dentatum 'Arrowwood'	36" HT.
VL	6	Nannyberry	Viburnum lentago	36" HT.
VA	9	American Cranberrybush	Viburnum trilobum	36" HT.

SOUTH BUFFER #1 PLANT SCHEDULE

TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE	CAL
AC	1	White Fir	Abies concolor	B&B	6" HD
MP	5	Prairie Fire Crab Apple	Malus x 'Prairie Fire'	B&B	1.5"
MS	3	Spring Snow Crab Apple	Malus x 'Spring Snow'	B&B	1.5"
PG	3	Colorado Blue Spruce	Picea pungens 'Glauca'	B&B	6" HD
PN	5	Newport Flowering Plum	Prunus caroliniana 'Newport'	B&B	1.5"
PD	3	Douglas Fir	Pseudotsuga menziesii	B&B	6" HD

SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONT
CI	5	Isanti Redstart Dogwood	Cornus sericea 'Isanti'	36" HT.
JF	18	Sea Green Juniper	Juniperus chinensis 'Sea Green'	24" HT.
SK	7	Miss Kim Korean Lilac	Syringa pubescens 'Miss Kim'	24" HT.
VD	3	Arrowwood Viburnum	Viburnum dentatum 'Arrowwood'	36" HT.
VA	5	American Cranberrybush	Viburnum trilobum	36" HT.

EAST BUFFER #2
30' BUFFER REQUIRED (714 LF)

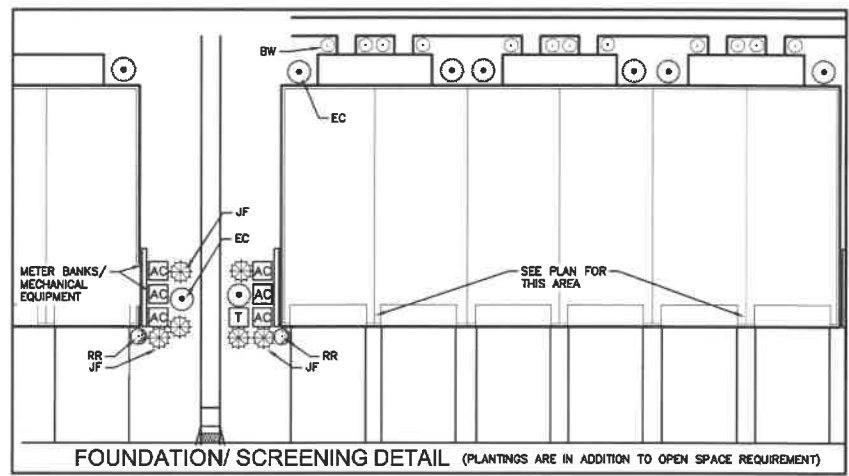
OVERSTORY OR EVERGREEN TREES = 21
UNDERSTORY TREES = 41
SHRUBS = 123

PROVIDED EVERGREEN TREES = 21
UNDERSTORY TREES = 41
SHRUBS = 123

SOUTH BUFFER #1
30' BUFFER REQUIRED (219 LF)

OVERSTORY OR EVERGREEN TREES = 7
UNDERSTORY TREES = 13
SHRUBS = 38

PROVIDED EVERGREEN TREES = 7
UNDERSTORY TREES = 13
SHRUBS = 38



FOUNDATION/ SCREENING DETAIL (PLANTINGS ARE IN ADDITION TO OPEN SPACE REQUIREMENT)

OPEN SPACE PLANT SCHEDULE

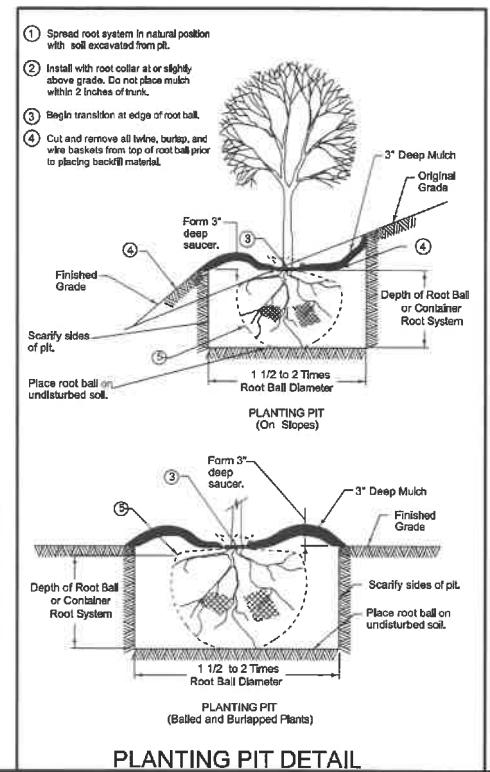
TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE	CAL
AC	9	White Fir	Abies concolor	B&B	6" H
CM	6	Crimson King Maple	Acer platanoides 'Crimson King'	B&B	2"
AA	3	Autumn Blaze Red Maple	Acer rubrum 'Autumn Blaze'	B&B	2"
GS	11	Skyline Honey Locust	Gleditsia triacanthos 'Skyline'	B&B	2"
PG	19	Colorado Blue Spruce	Picea pungens 'Glauca'	B&B	6" H
PD	12	Douglas Fir	Pseudotsuga menziesii	B&B	6" H
QB	11	Sweet White Oak	Quercus bicolor	B&B	2"
QR	17	Red Oak	Quercus rubra	B&B	2"

SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONT
BW	23	Wintergreen Boxwood	Buxus microphylla 'Wintergreen'	15" HT.
JF	36	Sea Green Juniper	Juniperus chinensis 'Sea Green'	24" HT.
RR	85	Fine Line Buckthorn	Rhamnus frangula 'Fine Line'	36" HT.

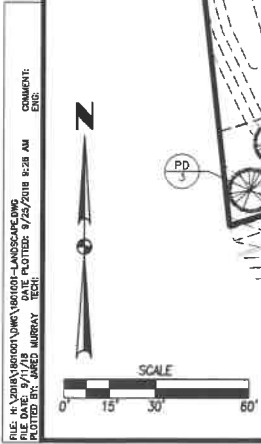
SOUTH BUFFER #2 PLANT SCHEDULE

TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE	CAL
AC	3	White Fir	Abies concolor	B&B	6"
CE	2	Eastern Redbud Multi-trunk	Cercis canadensis	B&B	1.5"
MP	5	Prairie Fire Crab Apple	Malus x 'Prairie Fire'	B&B	1.5"
MS	5	Spring Snow Crab Apple	Malus x 'Spring Snow'	B&B	1.5"
PG	3	Colorado Blue Spruce	Picea pungens 'Glauca'	B&B	6"
PN	5	Newport Flowering Plum	Prunus caroliniana 'Newport'	B&B	1.5"
PD	3	Douglas Fir	Pseudotsuga menziesii	B&B	6"

SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONT
EC	3	Compact Burning Bush	Euonymus alatus 'Compactus'	24" HT.
JF	35	Sea Green Juniper	Juniperus chinensis 'Sea Green'	24" HT.
SK	4	Miss Kim Korean Lilac	Syringa pubescens 'Miss Kim'	24" HT.
VD	3	Arrowwood Viburnum	Viburnum dentatum 'Arrowwood'	36" HT.
VL	3	Nannyberry	Viburnum lentago	36" HT.
VA	3	American Cranberrybush	Viburnum trilobum	36" HT.



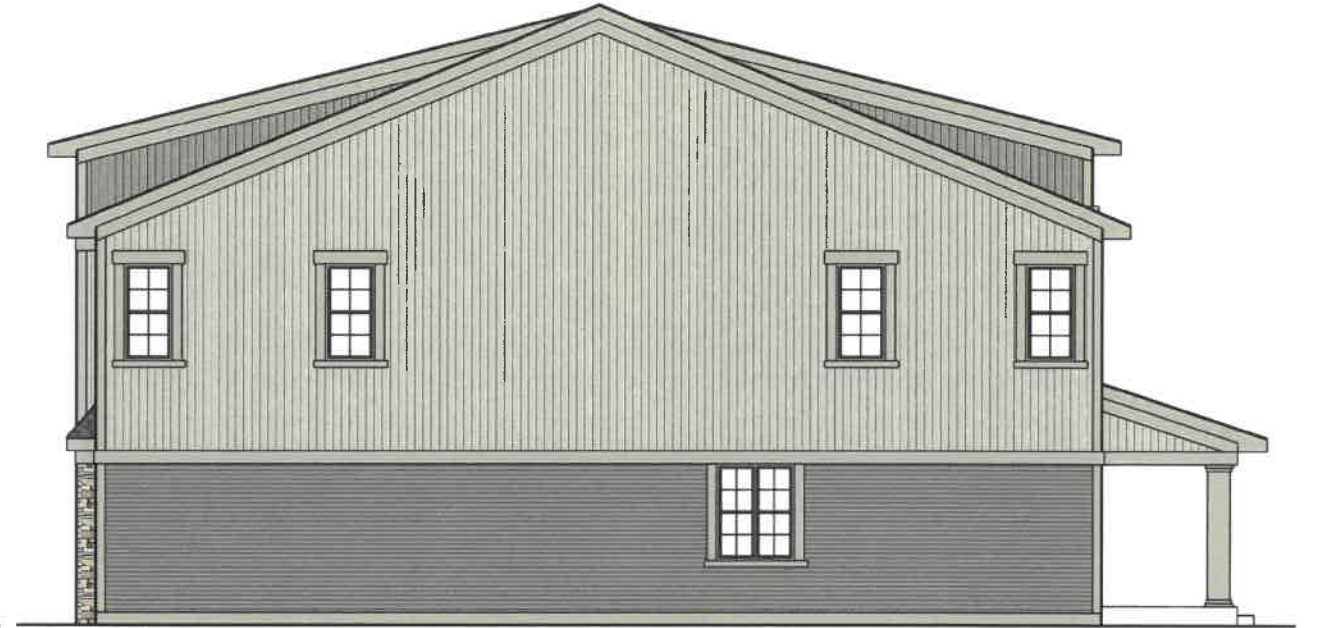
PLANTING PIT DETAIL



CRAFTSMAN ELEVATIONS



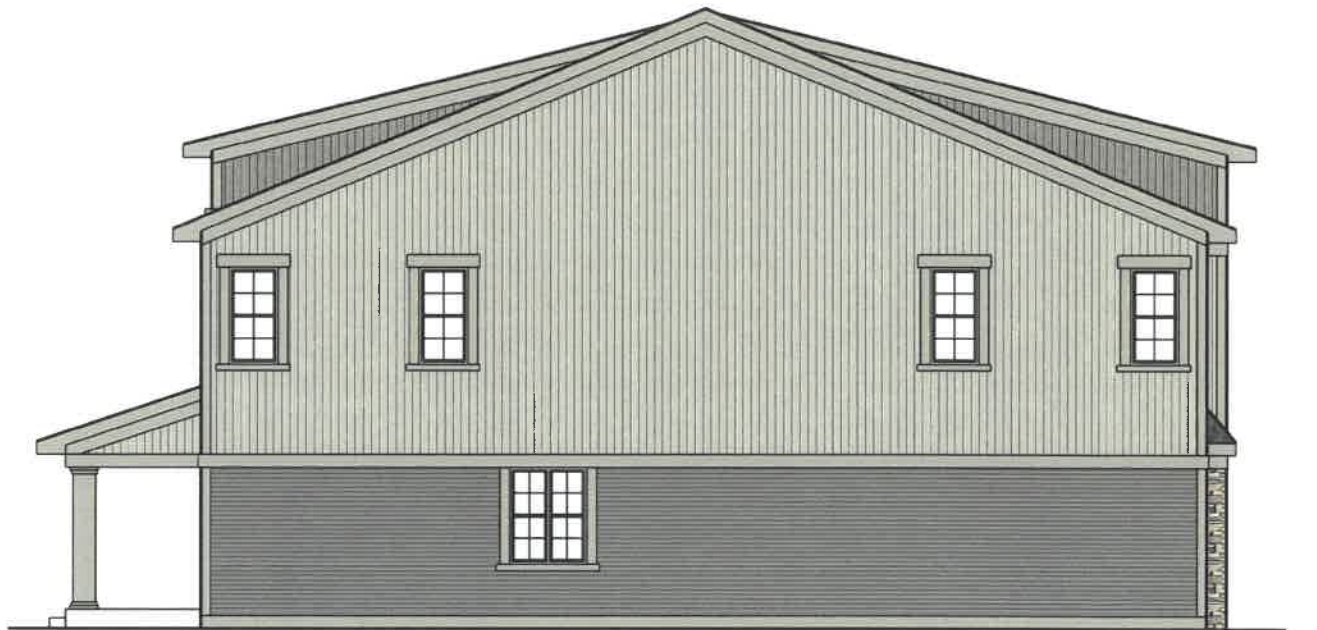
FRONT ELEVATION



LEFT ELEVATION



REAR ELEVATION



RIGHT ELEVATION

MODERN FARMHOUSE ELEVATIONS



FRONT ELEVATION



LEFT ELEVATION



REAR ELEVATION

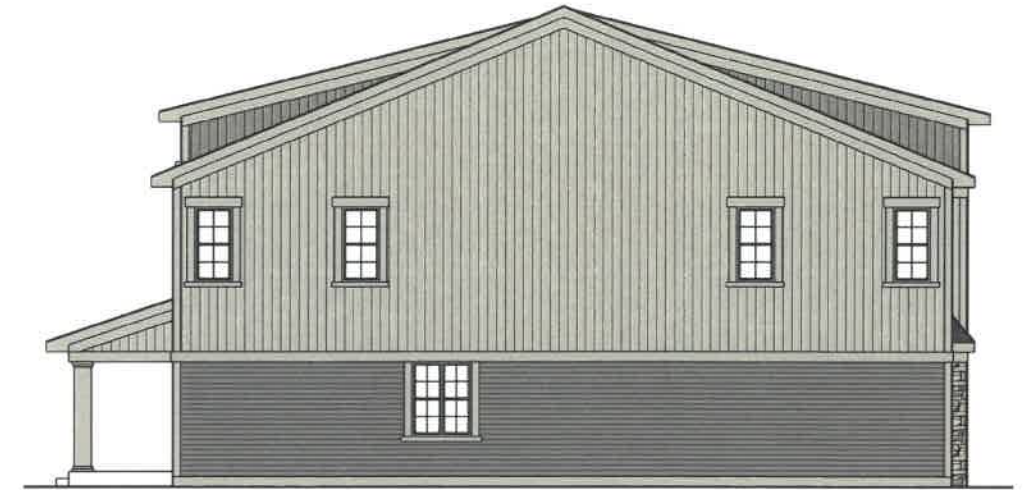


RIGHT ELEVATION

CRAFTSMAN ELEVATIONS



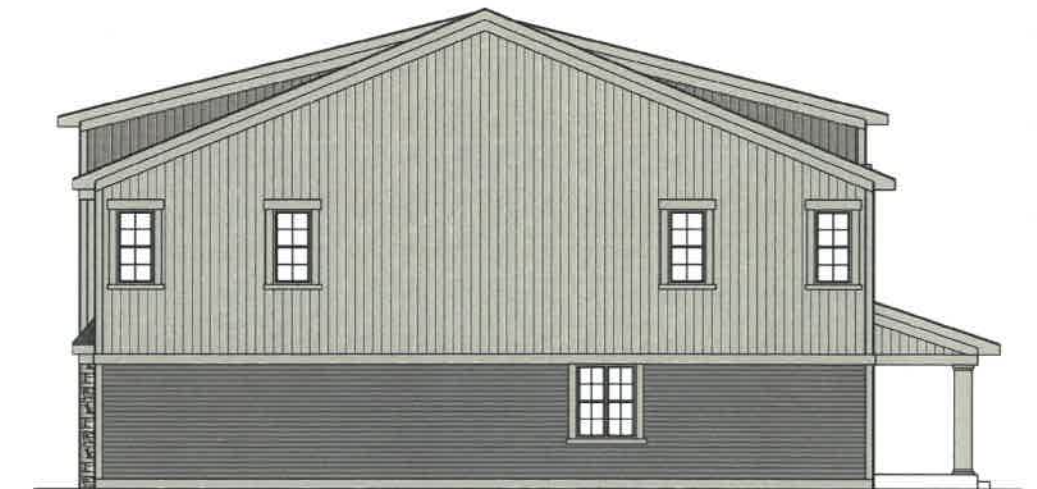
FRONT ELEVATION



LEFT ELEVATION



REAR ELEVATION



RIGHT ELEVATION

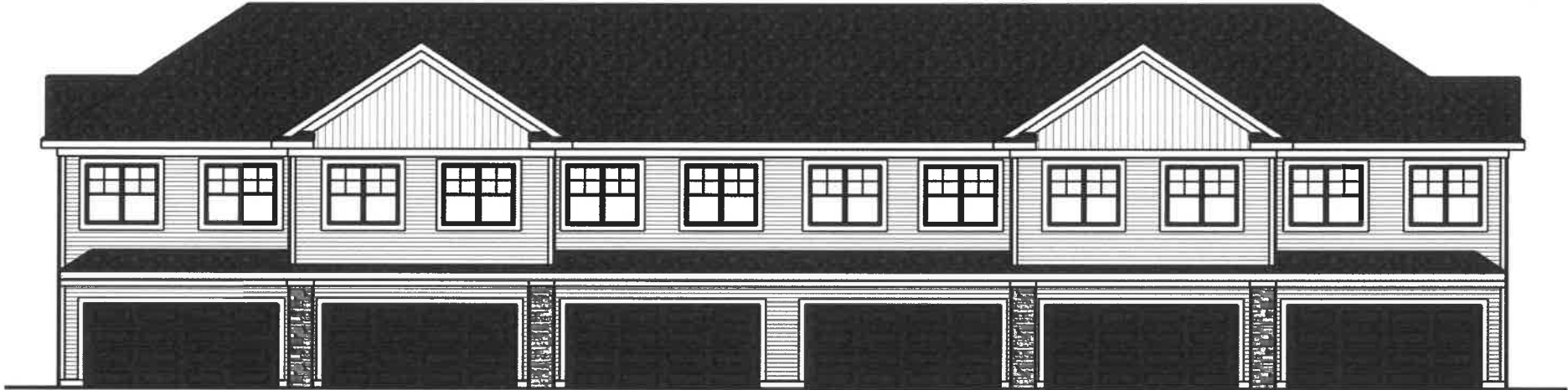
MODERN FARMHOUSE ELEVATIONS



FRONT ELEVATION



LEFT ELEVATION



REAR ELEVATION



RIGHT ELEVATION

TRADITIONAL ELEVATIONS



FRONT ELEVATION



LEFT ELEVATION



REAR ELEVATION



RIGHT ELEVATION