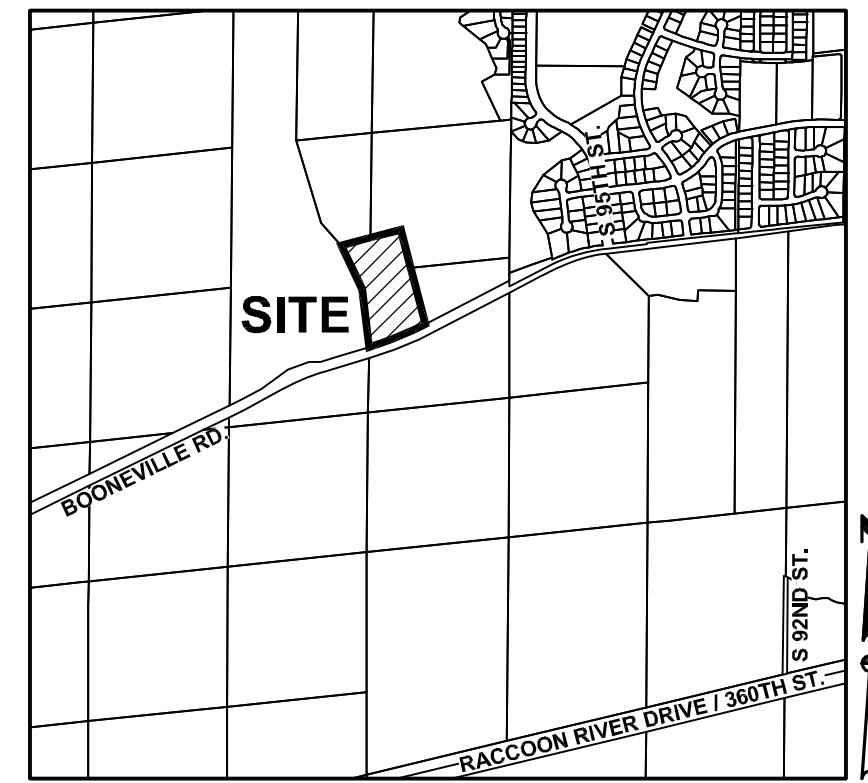


# PRELIMINARY PLAT AND SITE PLAN FOR: KING'S GROVE TOWNHOMES

## WEST DES MOINES, IOWA

### VICINITY MAP

NOT TO SCALE



WEST DES MOINES, IOWA

### 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 MCGLOTHLEN  
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

### 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

### 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.

**CDA**  
CIVIL DESIGN ADVANTAGE

3405 SE CROSSROADS DR. SUITE G, GRIMES, IOWA 50111

PH: (515) 369-4400 Fax: (515) 369-4410

PROJECT NO. 1801.001

**IOWA ONE CALL**

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.

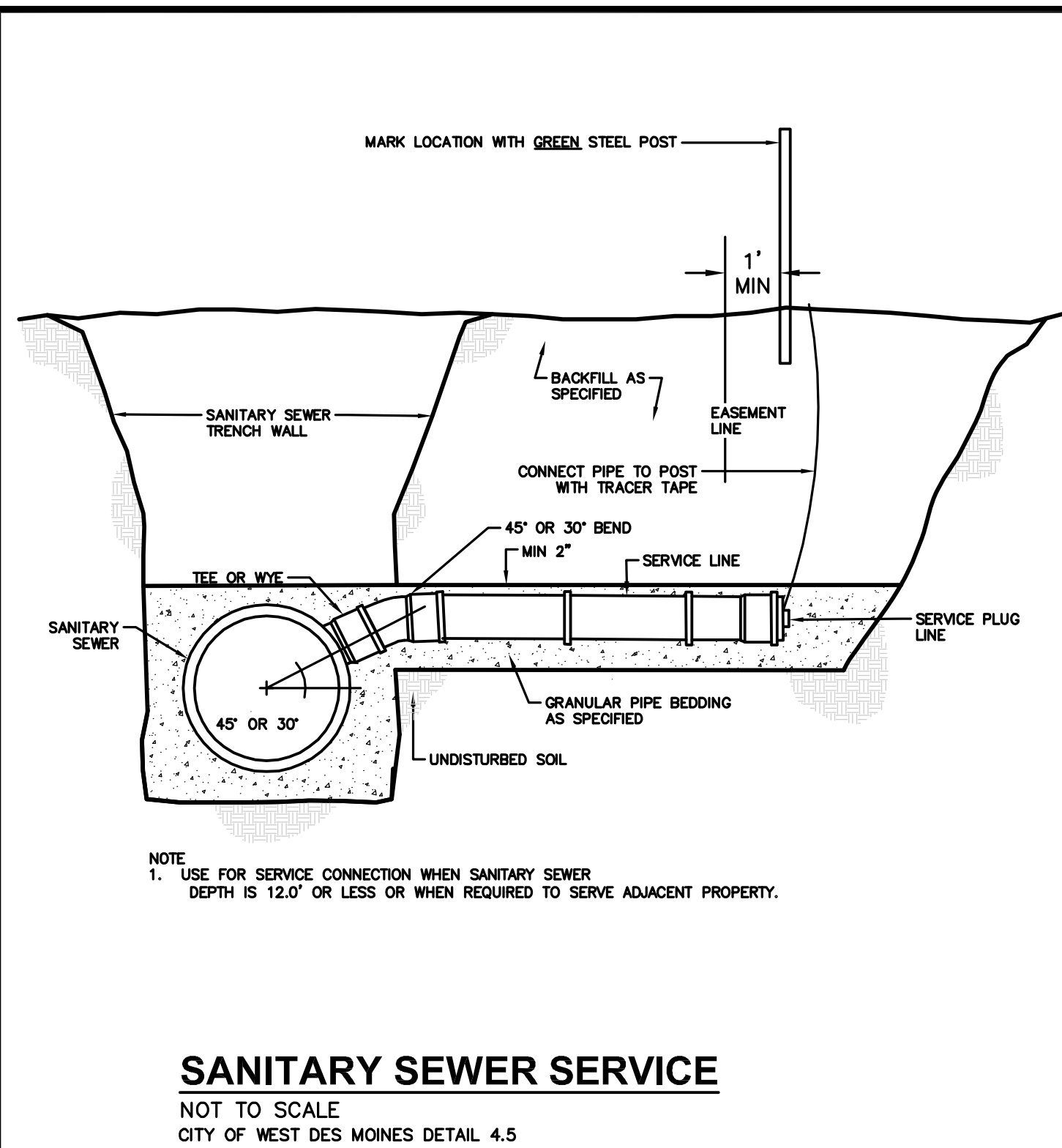
ERIN K. OLLENDIKE, P.E. DATE

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2019

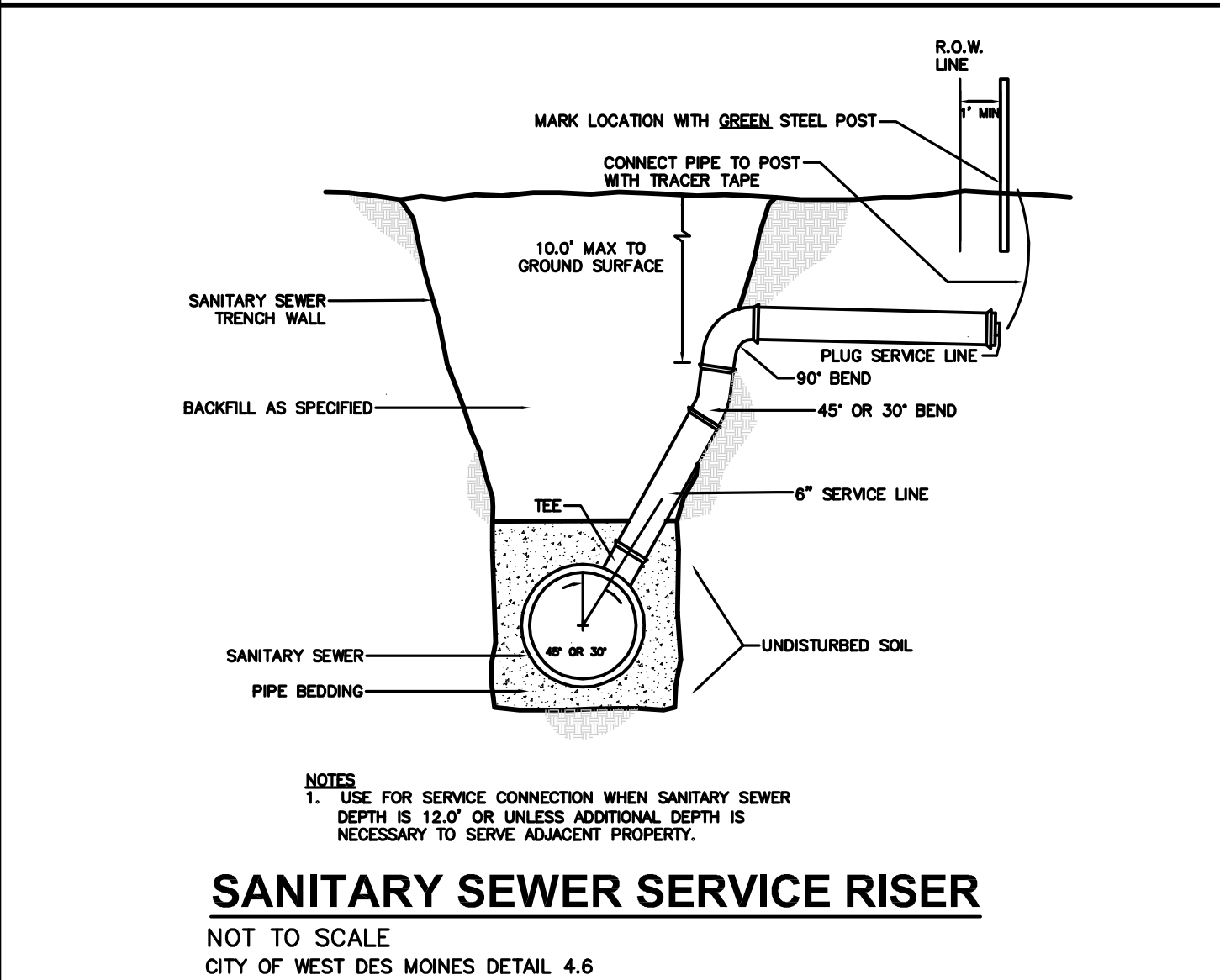
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SHEETS 1.0-7.1

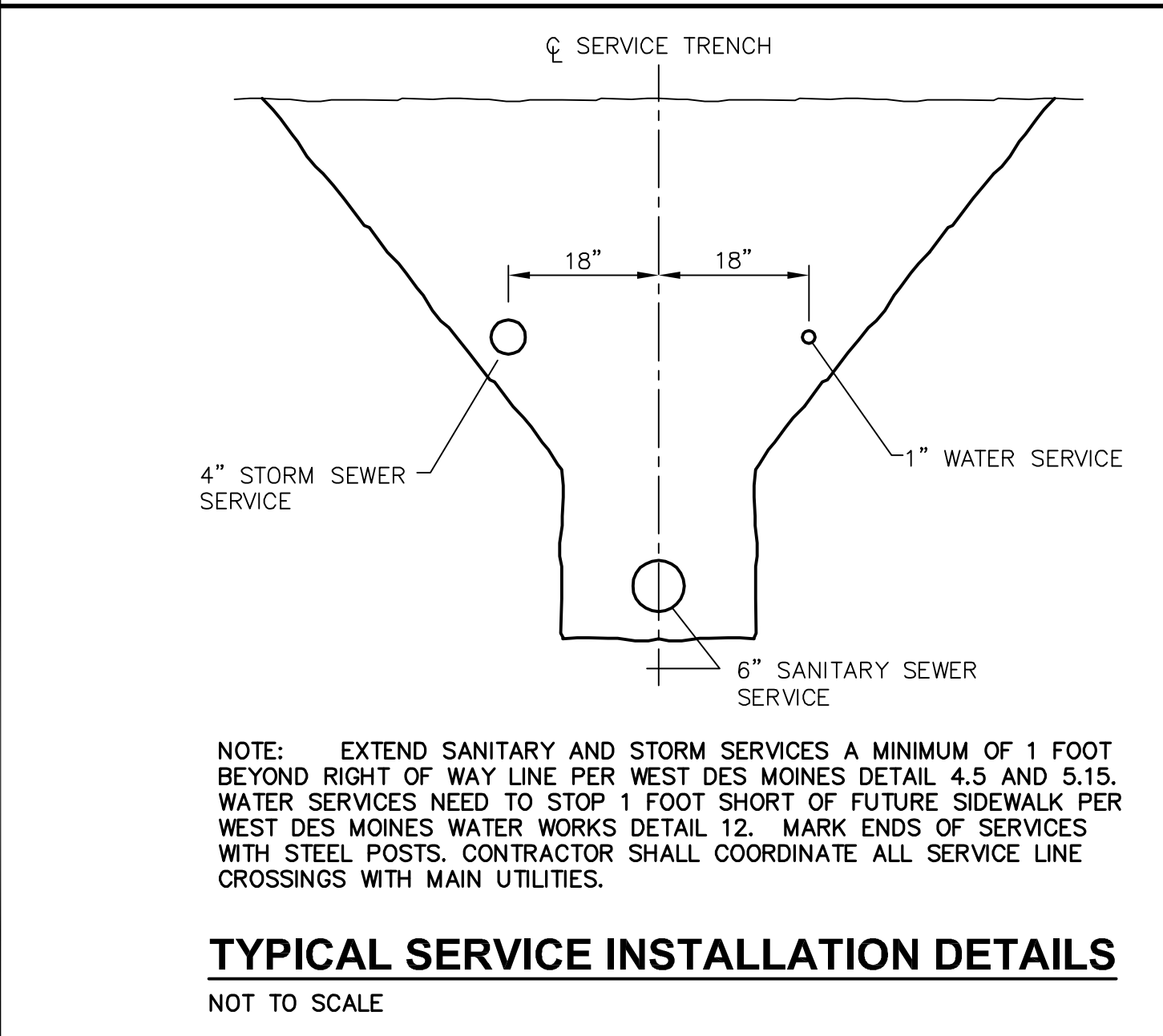




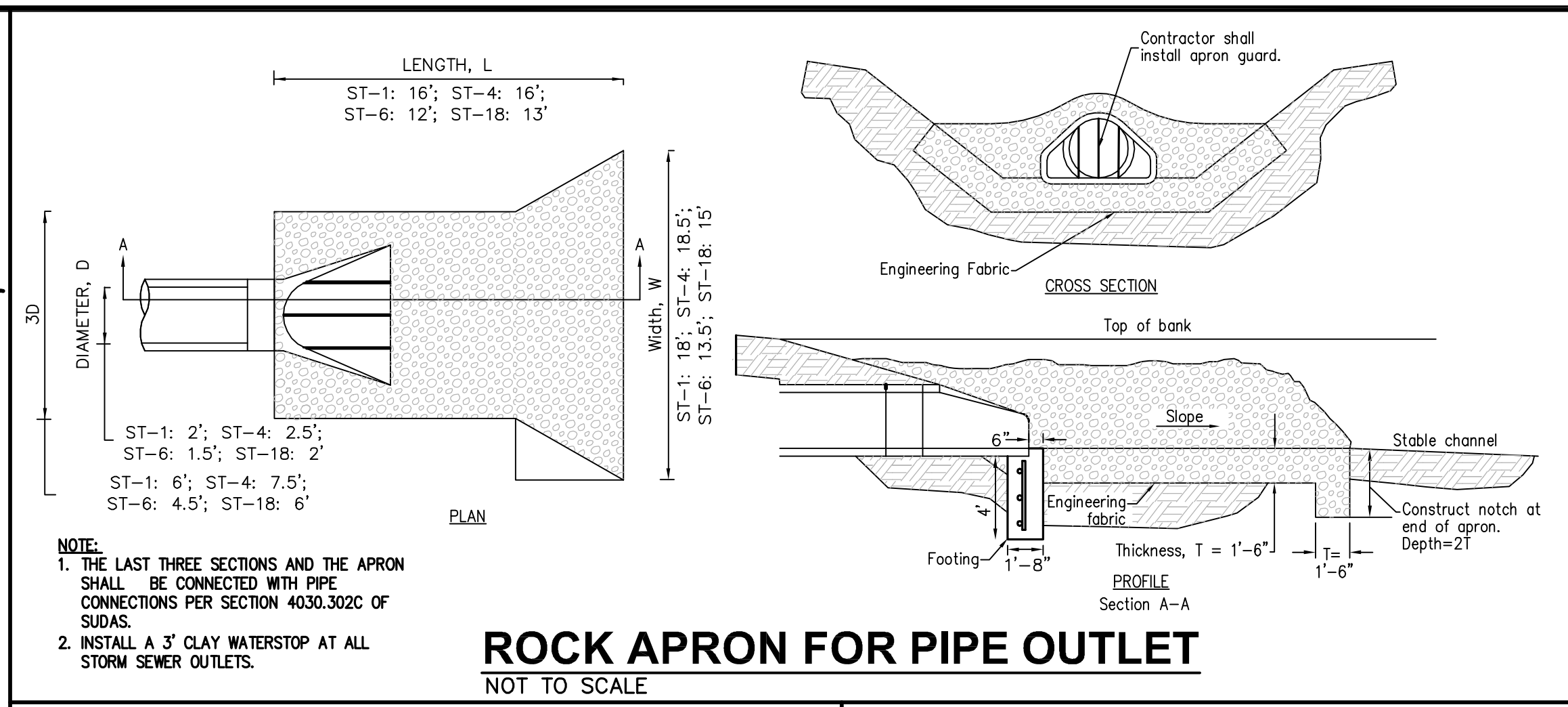
**SANITARY SEWER SERVICE**  
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CITY OF WEST DES MOINES DETAIL 4.5



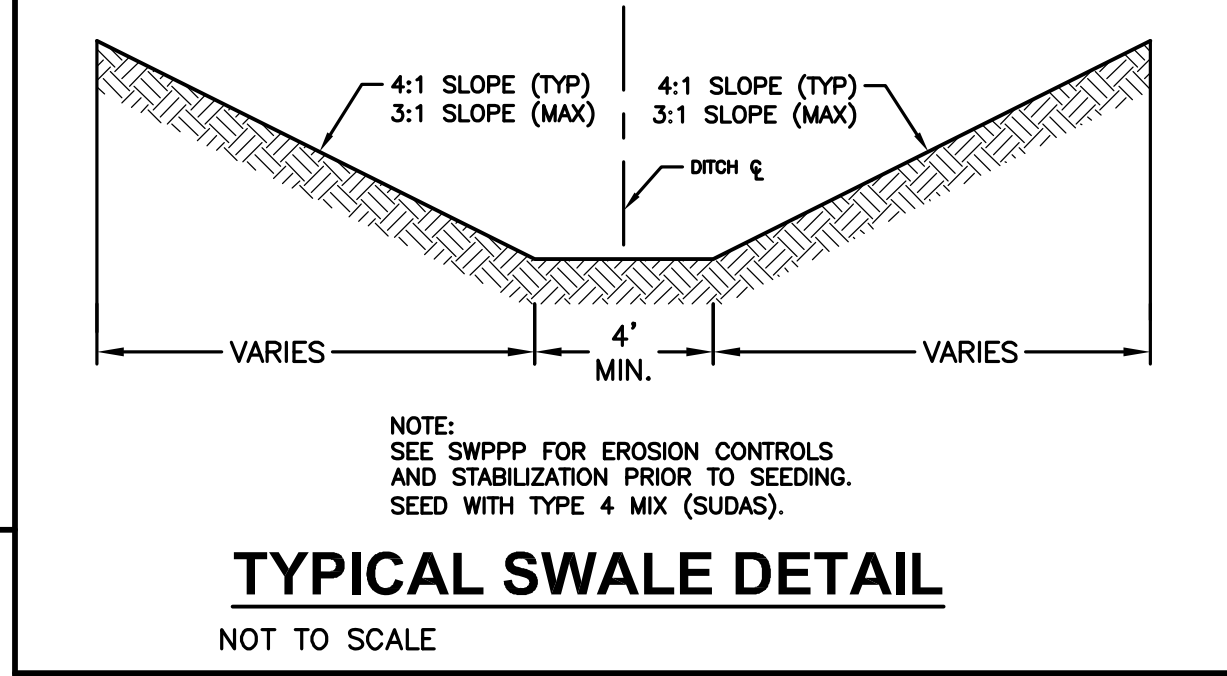
**SANITARY SEWER SERVICE RISER**  
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CITY OF WEST DES MOINES DETAIL 4.6



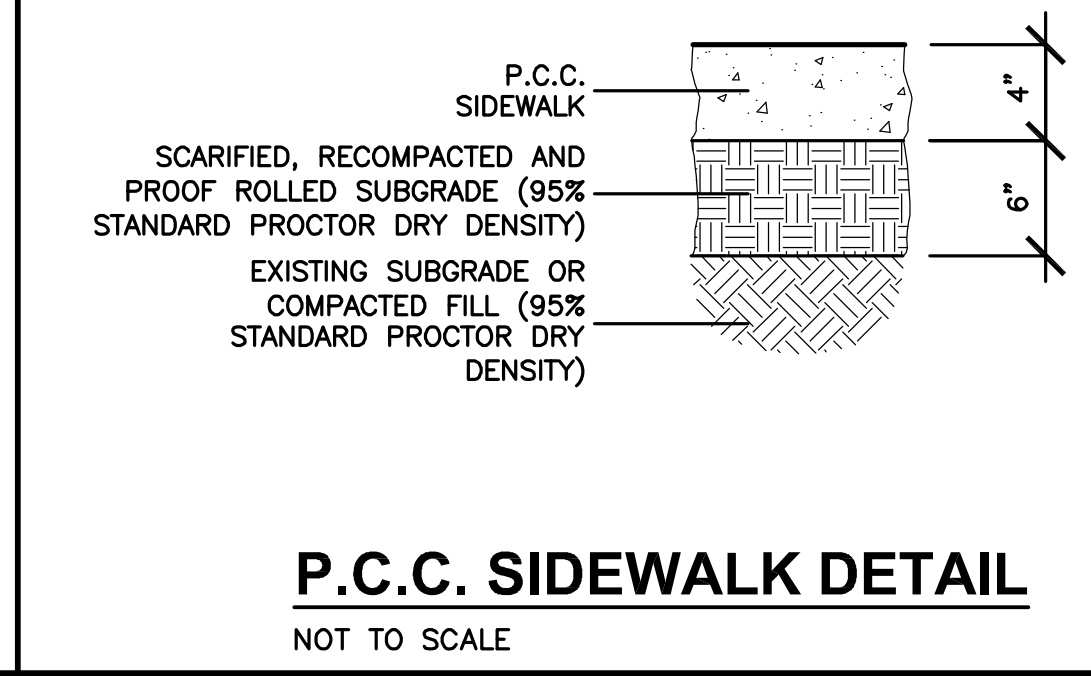
**TYPICAL SERVICE INSTALLATION DETAILS**  
NOT TO SCALE



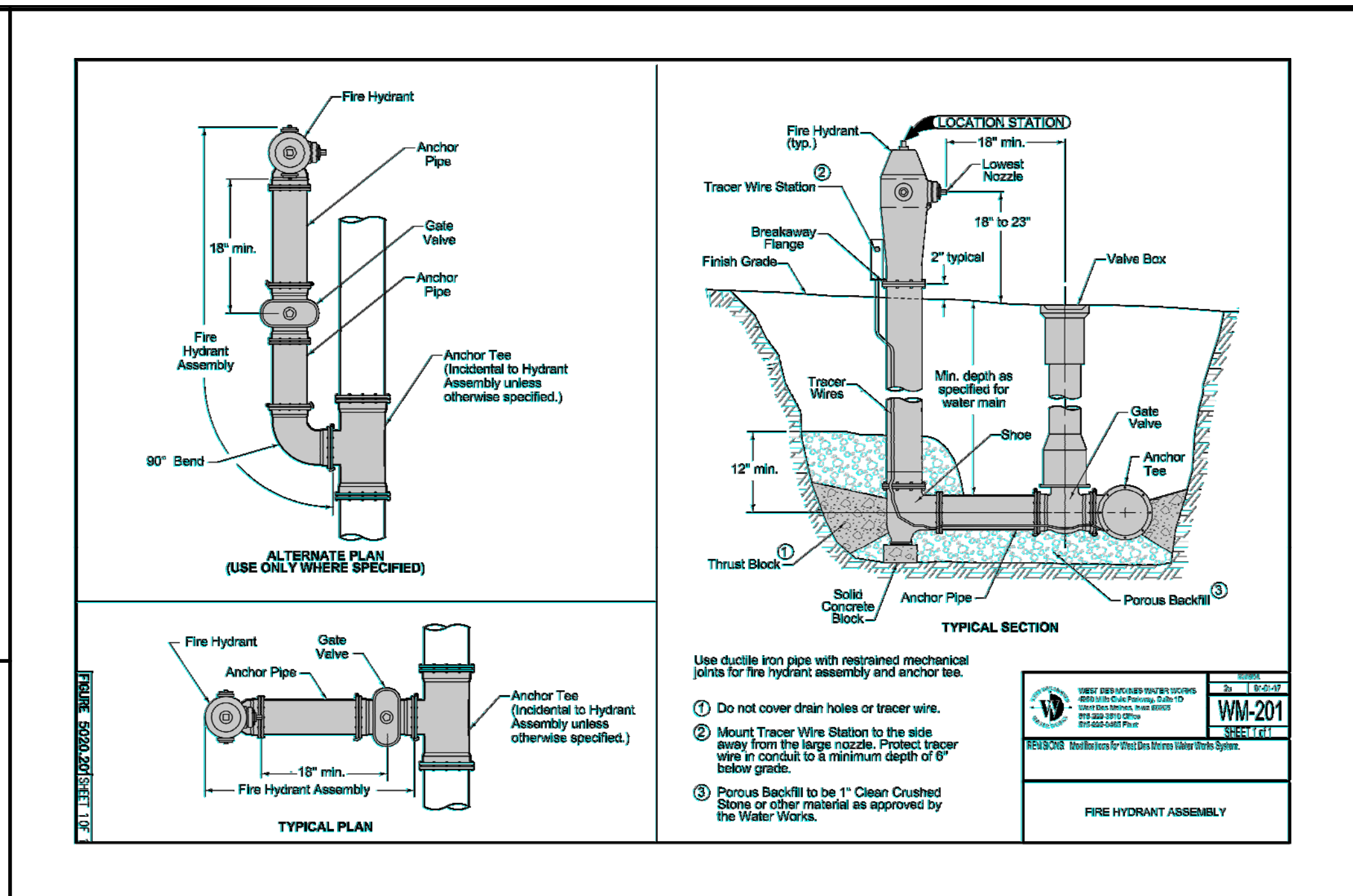
**ROCK APRON FOR PIPE OUTLET**  
NOT TO SCALE



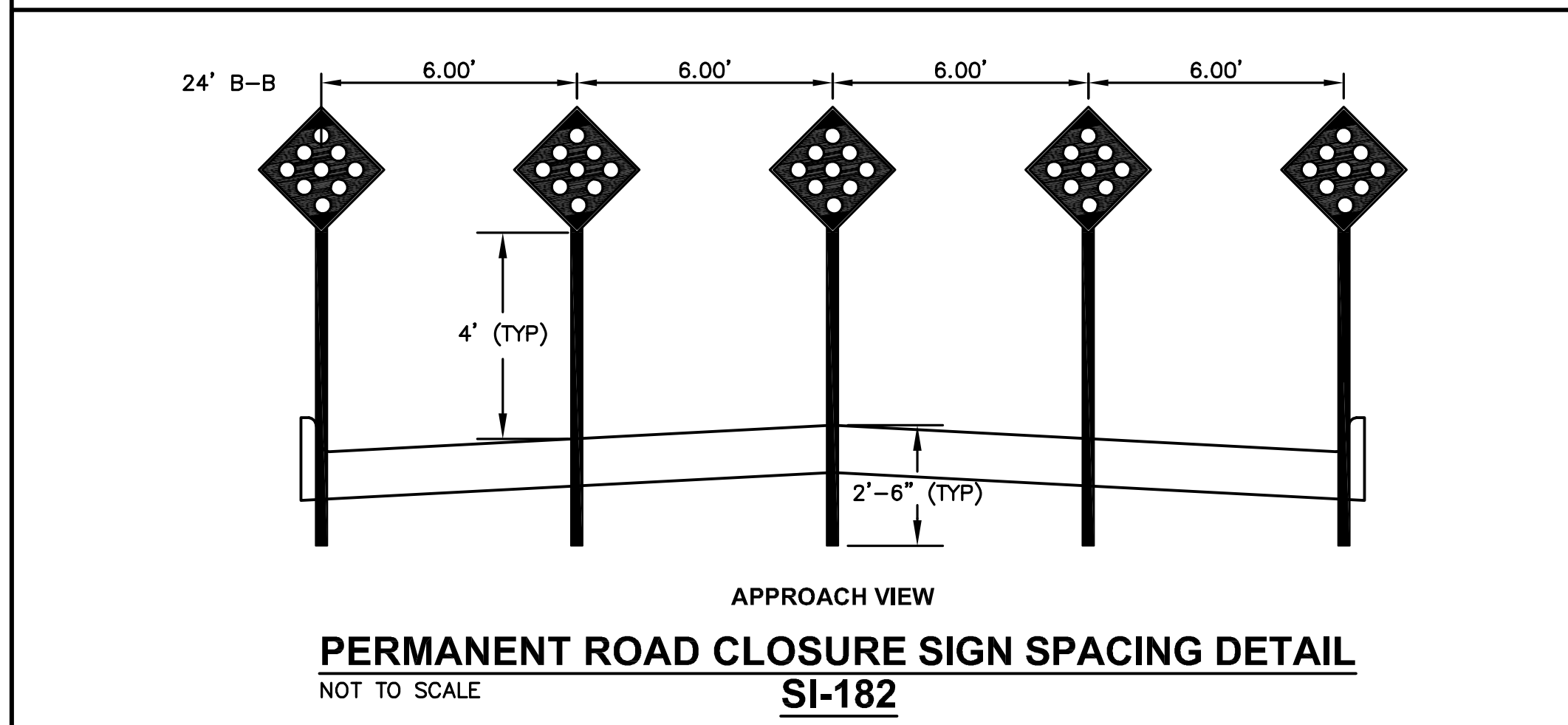
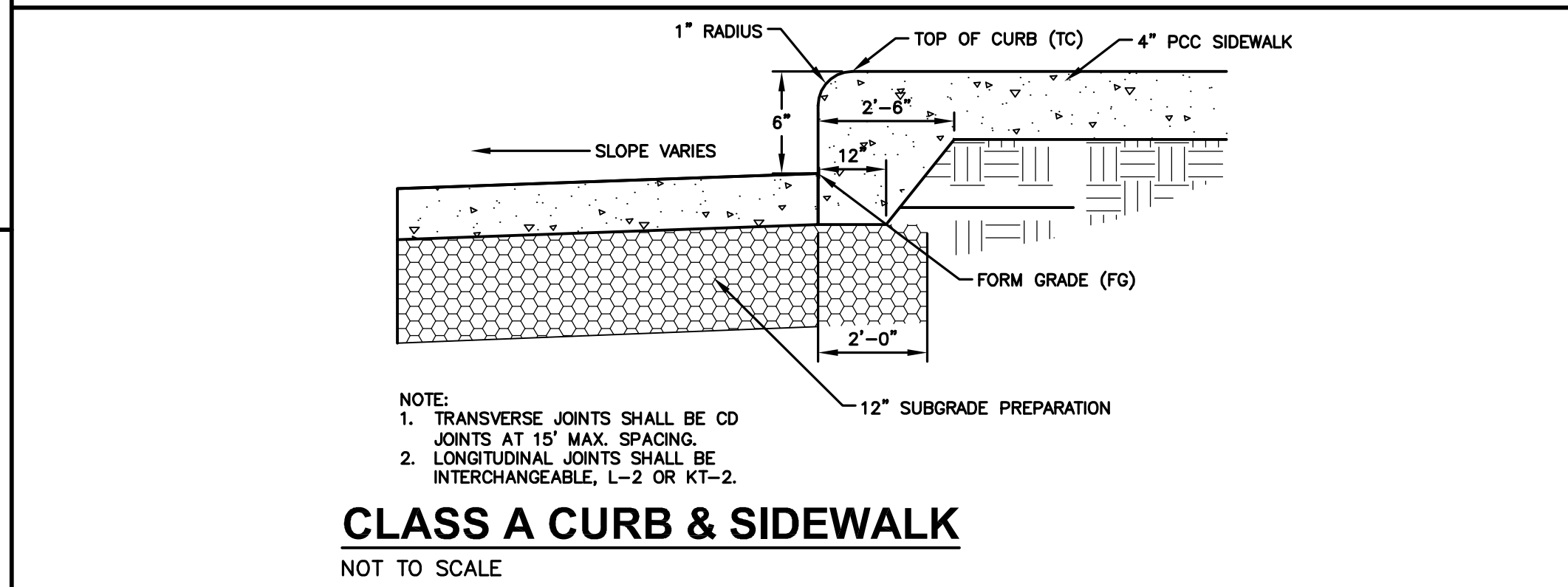
**TYPICAL SWALE DETAIL**  
NOT TO SCALE



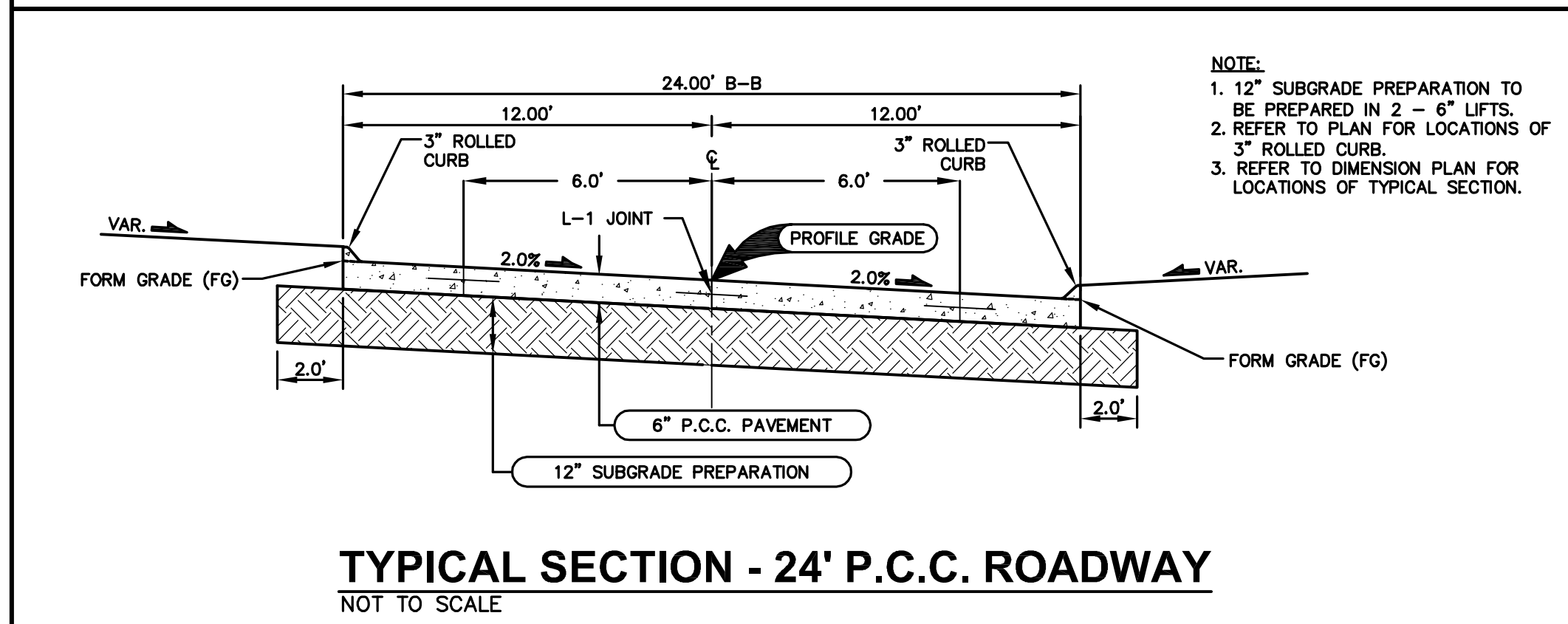
**P.C.C. SIDEWALK DETAIL**  
NOT TO SCALE



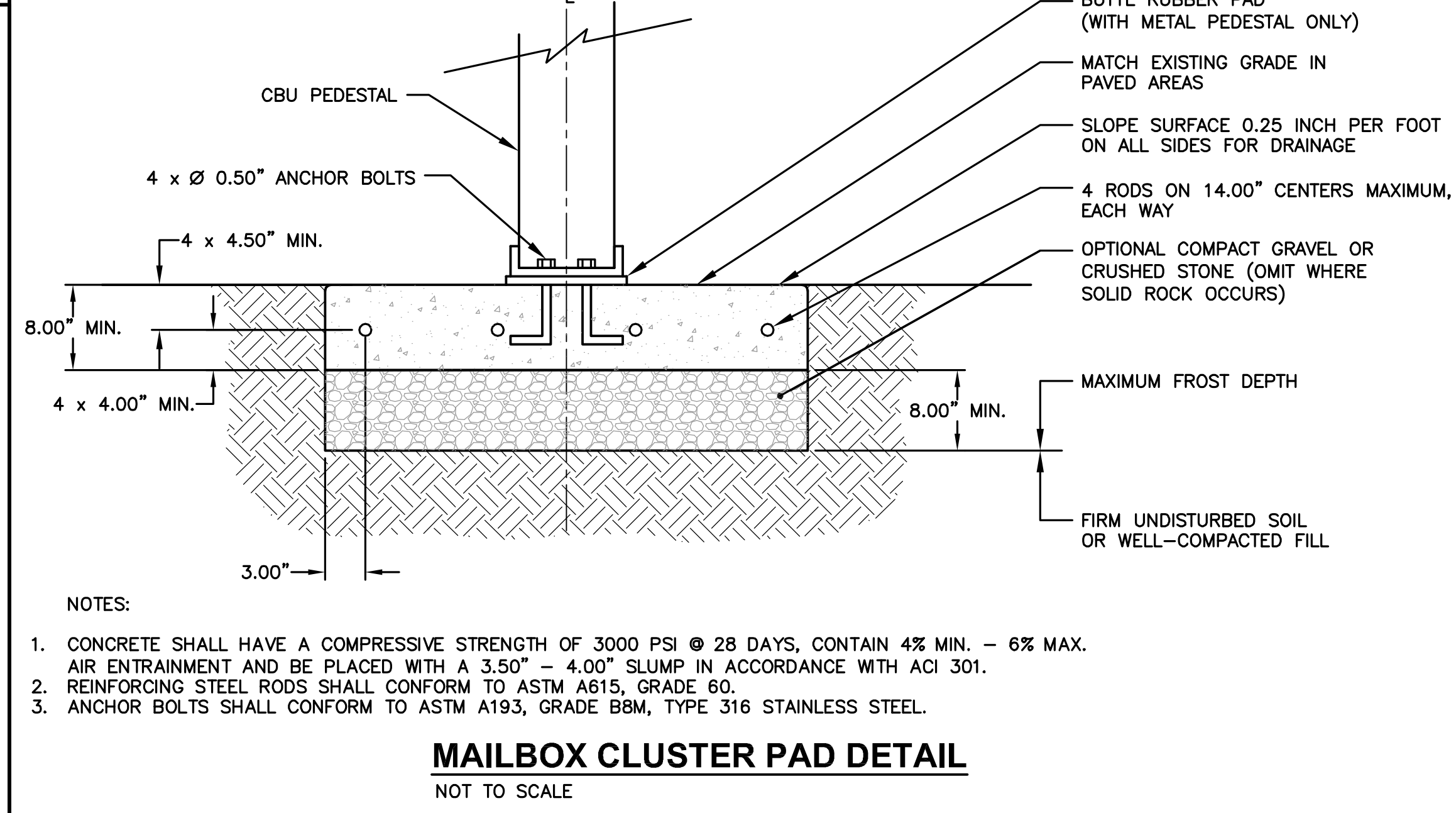
**CLASS A CURB & SIDEWALK**  
NOT TO SCALE



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



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

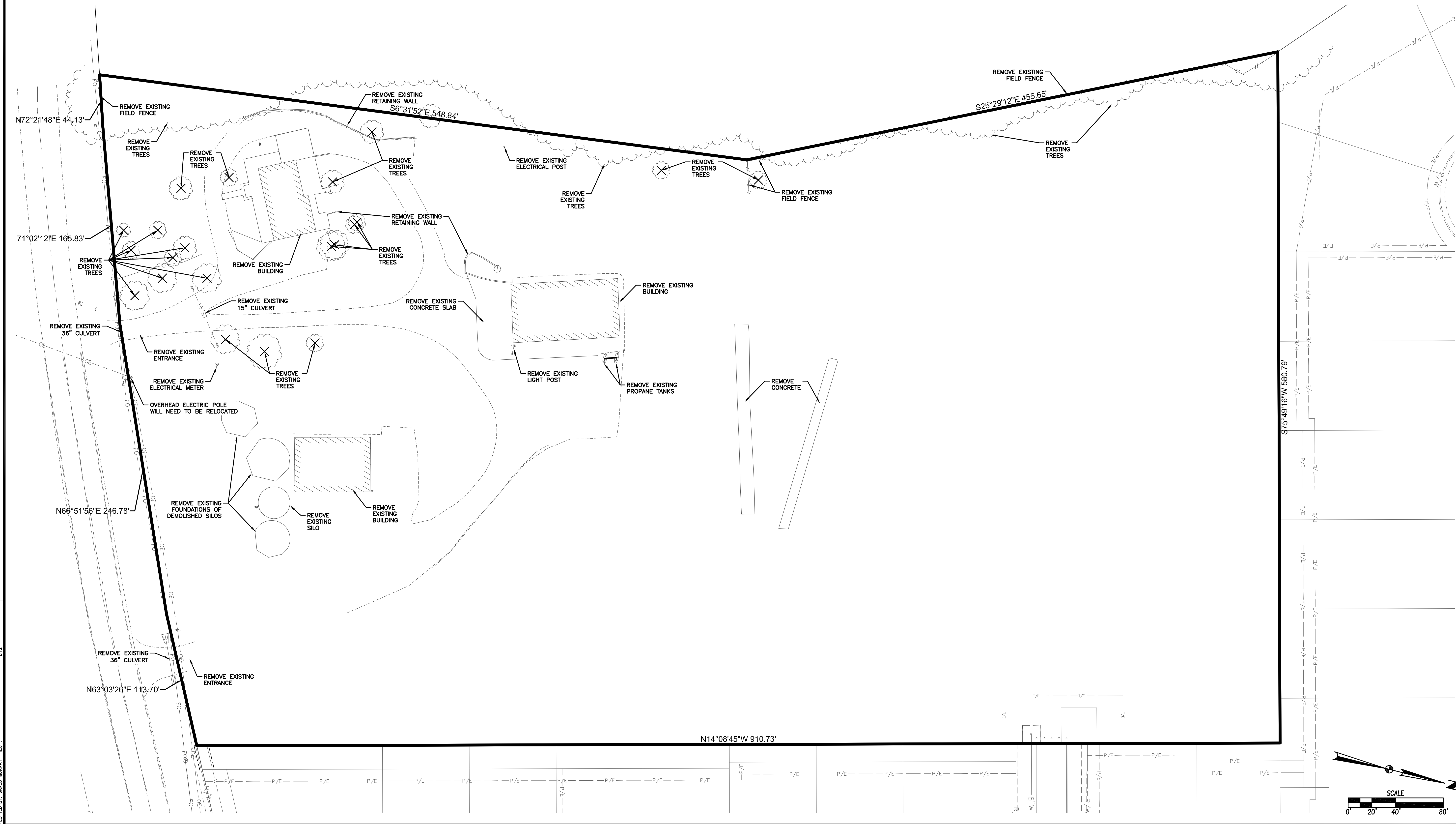


**MAILBOX CLUSTER PAD DETAIL**  
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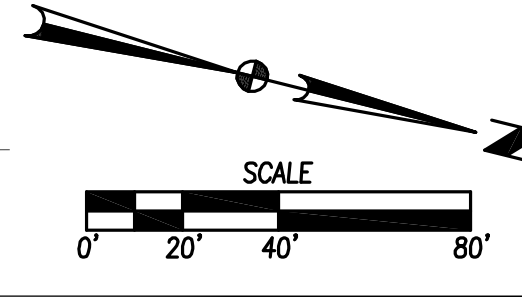


**DEMOLITION NOTES**

- 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 OFFSITE 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.

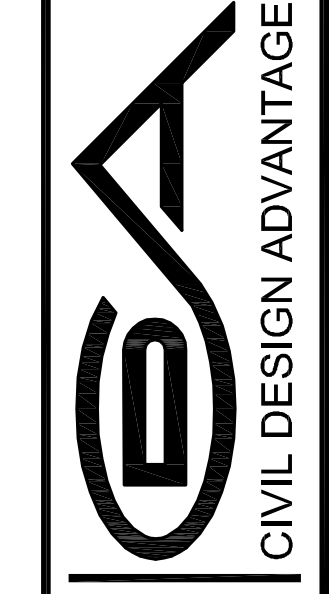


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 DRAWING: 3.0



REVISIONS	DATE
FINAL CITY SUBMITTAL	09/24/18
CITY SUBMITTAL #4	08/20/18
CITY SUBMITTAL #3	07/31/18
CITY SUBMITTAL #2	07/06/18
CITY SUBMITTAL #1	05/25/18

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**  
**DEMOLITION PLAN**  
 WEST DES MOINES, IOWA

**3.0**  
 1801.001



**GENERAL NOTES**

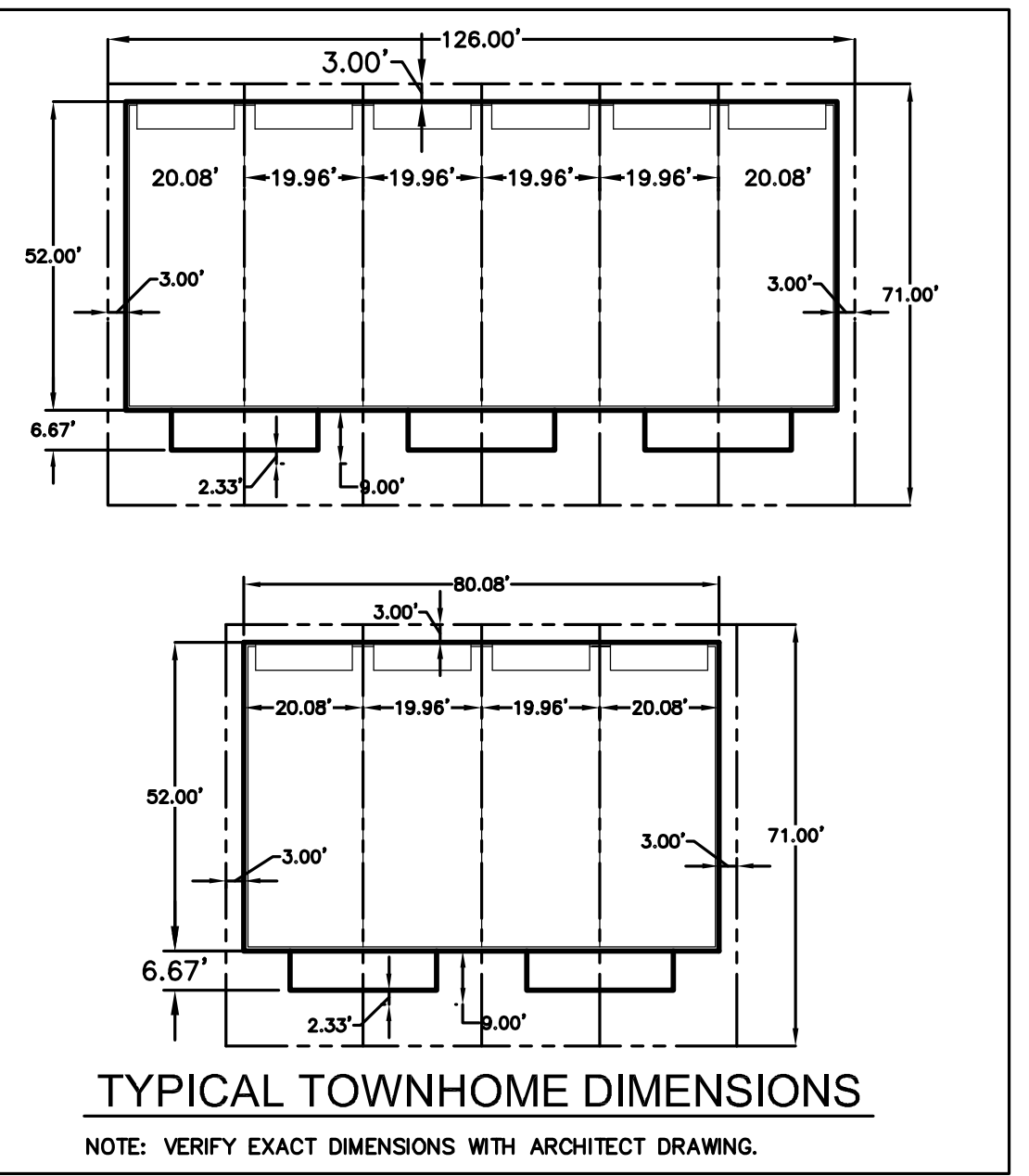
1. THE MOST RECENT EDITION OF THE WEST DES MOINES STANDARDS FOR SUBDIVISIONS AND THE WEST DES MOINES WATER WORKS STANDARD SPECIFICATIONS FOR SUBDIVISIONS SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
2. ALL WORK SHALL COMPLY WITH ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.
3. 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.
4. 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.
5. 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 (222-3475) TO OBTAIN APPLICABLE CITY PERMITS THAT MAY BE NECESSARY.
6. 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 MMW ADDENDUMS.
7. ALL DIMENSIONS ARE TO BACK OF CURB, BUILDING FACE OR PROPERTY LINE UNLESS OTHERWISE NOTED.
8. CONTRACTOR TO VERIFY BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.
9. PLACE 1/2 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.
10. REMOVE ALL DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY.
11. ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
12. DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE RIGHT OF WAY.
13. THE 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.
14. 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.
15. THE 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.
16. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF TEMPORARY TRAFFIC CONTROL DEVICES AND SUBCONTRACTORS INVOLVED IN THE PROJECT, INCLUDING STAGING OF CONSTRUCTION DETAILS.
17. ALL PERMITS AND ADDITIONAL FEES REQUIRED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACTOR BID.
18. TRAFFIC CONTROL DEVICES SHALL BE PLACED FOR THE BUILDING INTERNAL OR IN LOADING AREA AND SCREENED BY EXISTING WALL.
19. THE MONUMENT SIGNS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. SIGNS ARE NOT APPROVED AS PART OF THE SITE PLAN REVIEW.
20. INDIVIDUAL GARBAGE TOTES ARE TO BE USED AND STORED IN GARAGE.

**TRAFFIC CONTROL NOTES**

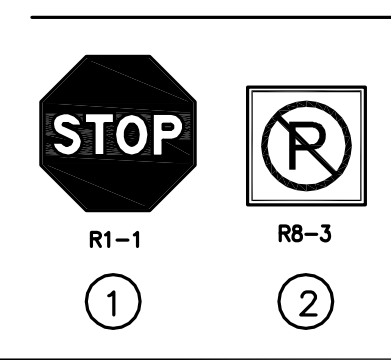
1. ALL APPLICABLE CITY PERMITS, INCLUDING BUT NOT LIMITED TO CLOSURE PERMITS, SHALL BE OBTAINED PRIOR TO ANY CONSTRUCTION WITHIN CITY R.O.W. OR LANE CLOSURES.
2. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
3. PERMANENT SIGNING 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.
4. THE CONTRACTOR SHALL COORDINATE HIS TRAFFIC CONTROL WITH OTHER CONSTRUCTION PROJECTS IN THE AREA.
5. 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 R205 AND IOWA DOT DESIGN MANUAL, CHAPTER 12A-4.
6. 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.
7. 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.



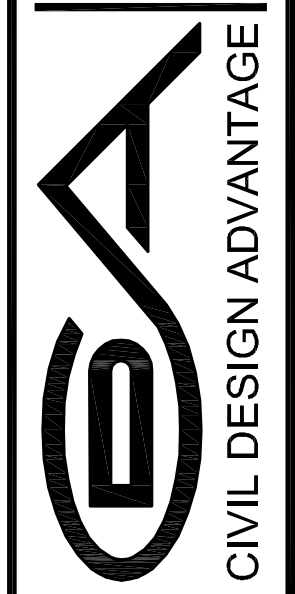
**SIGN LEGEND**



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 PLOTTED BY: JARED MURRAY  
 DATE: 9/25/2018 9:25 AM

DATE	REVISIONS
09/24/18	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

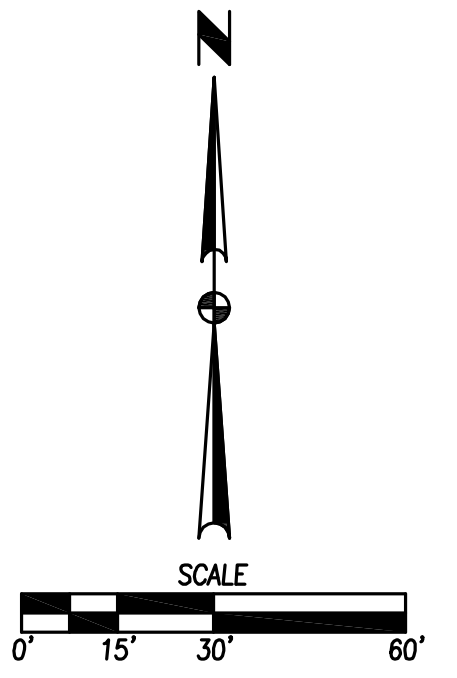
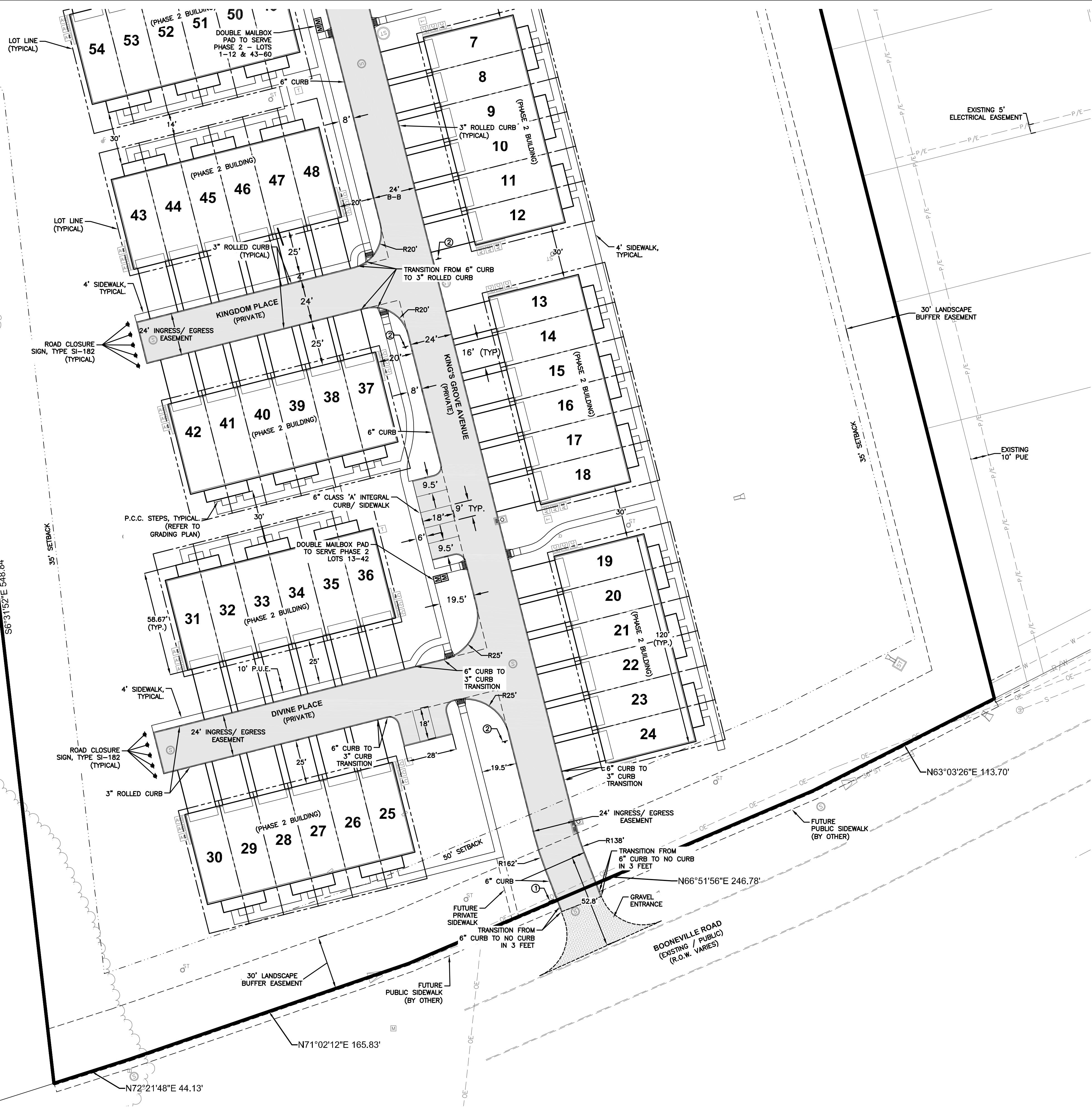
3405 S.E. CROSSROADS DRIVE, SUITE G  
 GRIMES, IOWA 50111  
 PHONE: (515) 369-4400 FAX: (515) 369-4410  
 ENGINEER: EKO  
 EI: GH



**KING'S GROVE TOWNHOMES**  
**DIMENSION PLAN**  
 WEST DES MOINES, IOWA  
**4.0**  
 1801.001

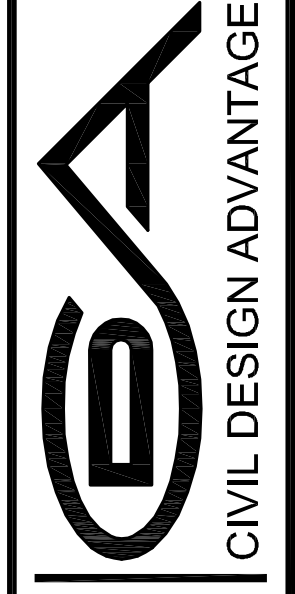


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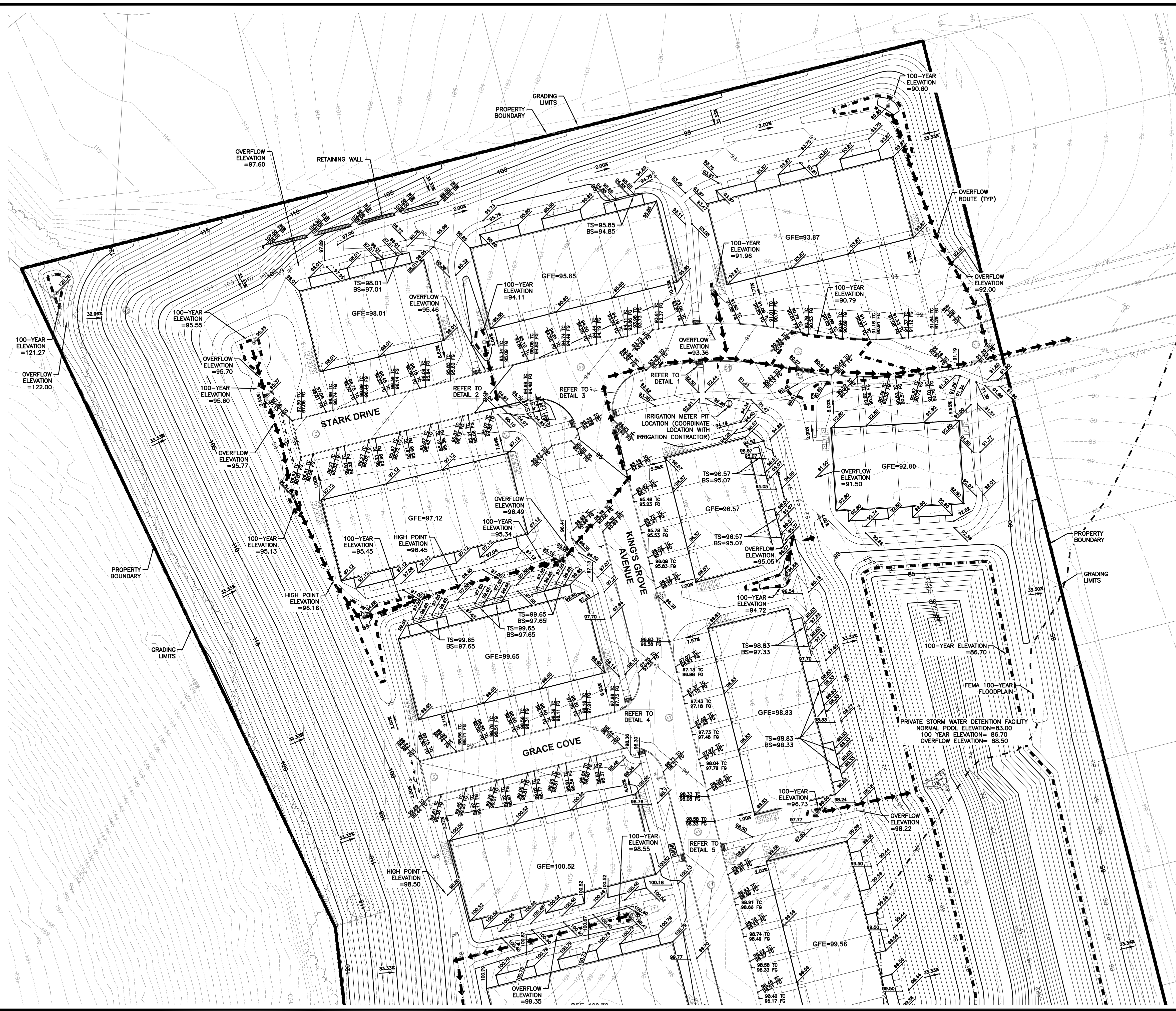
# KING'S GROVE TOWNHOMES

## WEST DES MOINES, IOWA

### DIMENSION PLAN



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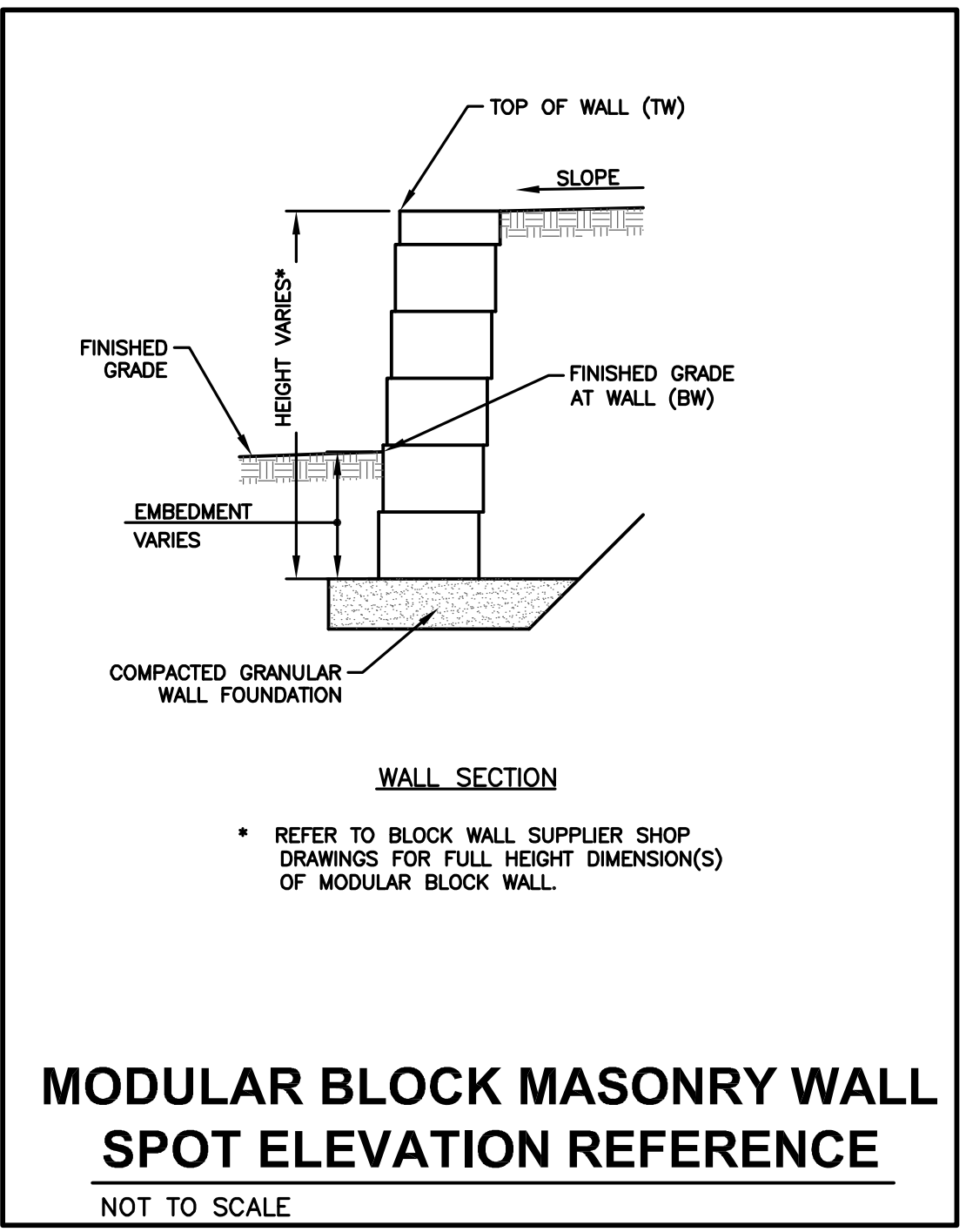


**GRADING NOTES**

- 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 CONFINED 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 HAUL 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 1/3, TRANSVERSE 1/4.

**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



DATE: 09/24/18  
 08/20/18  
 07/31/18  
 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

**ES&A**  
 CIVIL DESIGN ADVANTAGE

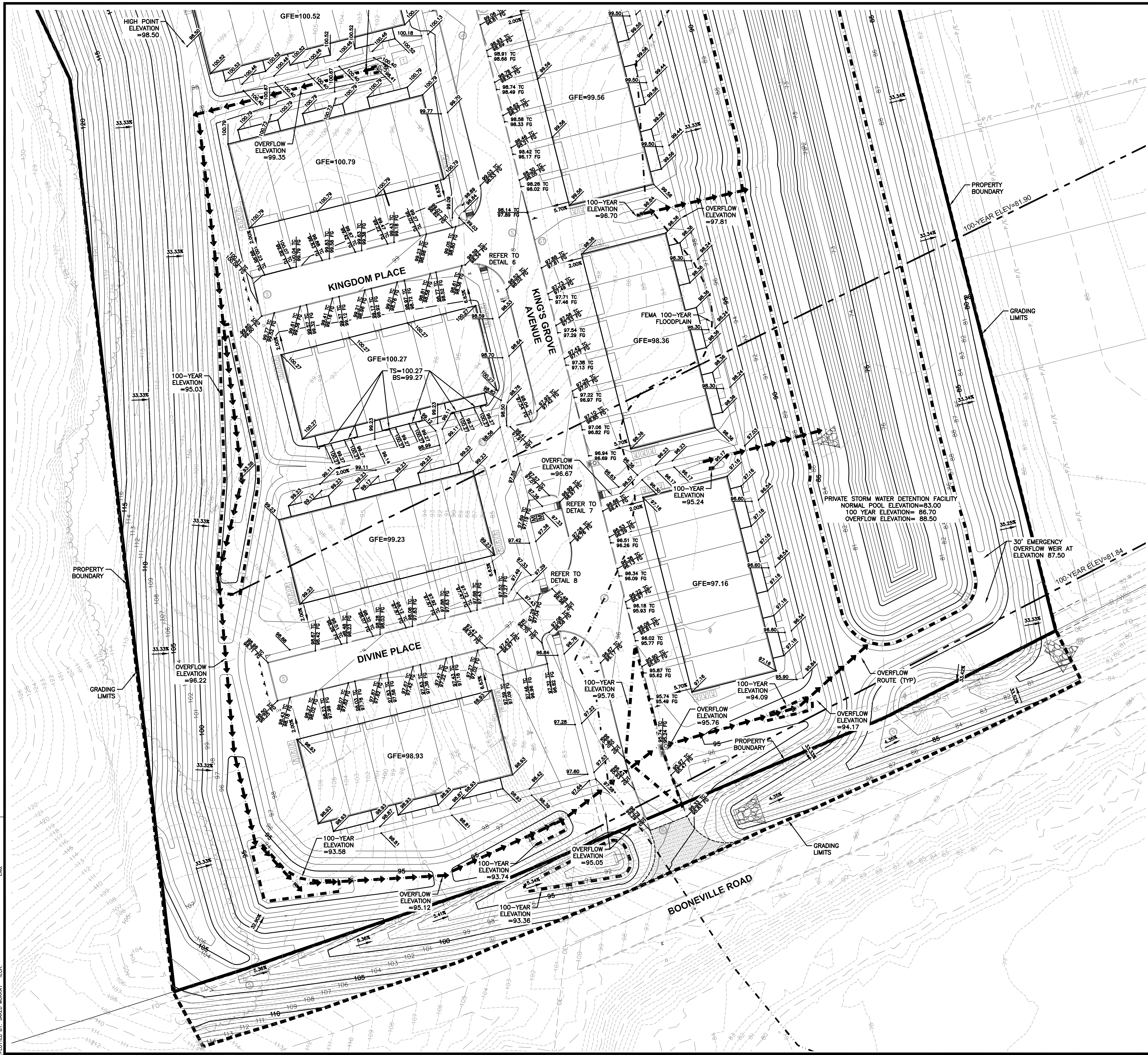
**KING'S GROVE TOWNHOMES**  
 GRADING PLAN

WEST DES MOINES, IOWA

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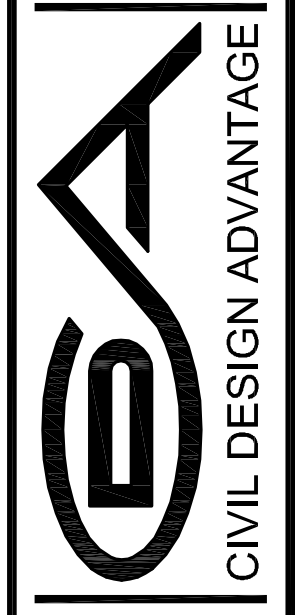


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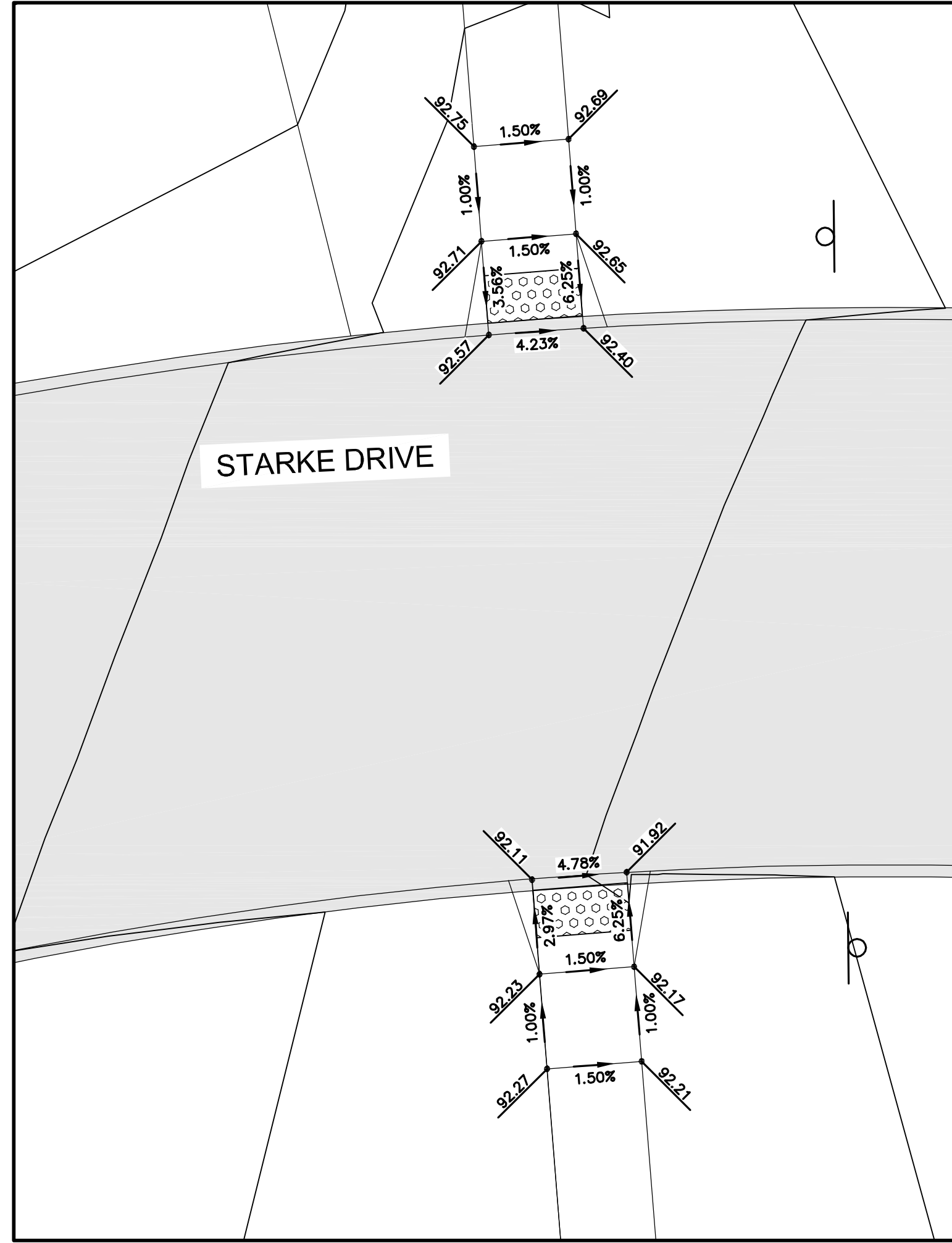
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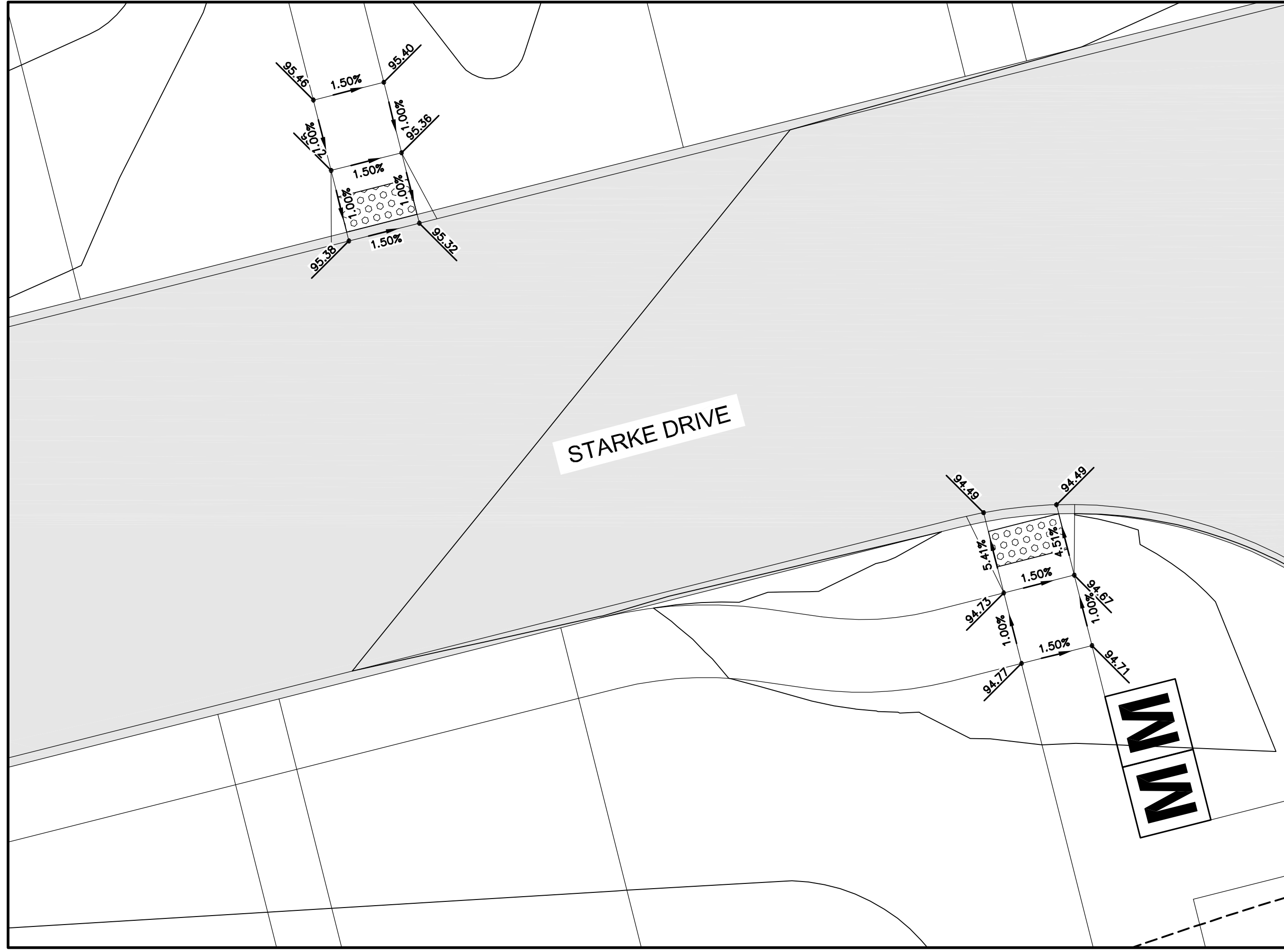
# KING'S GROVE TOWNHOMES

## GRADING PLAN

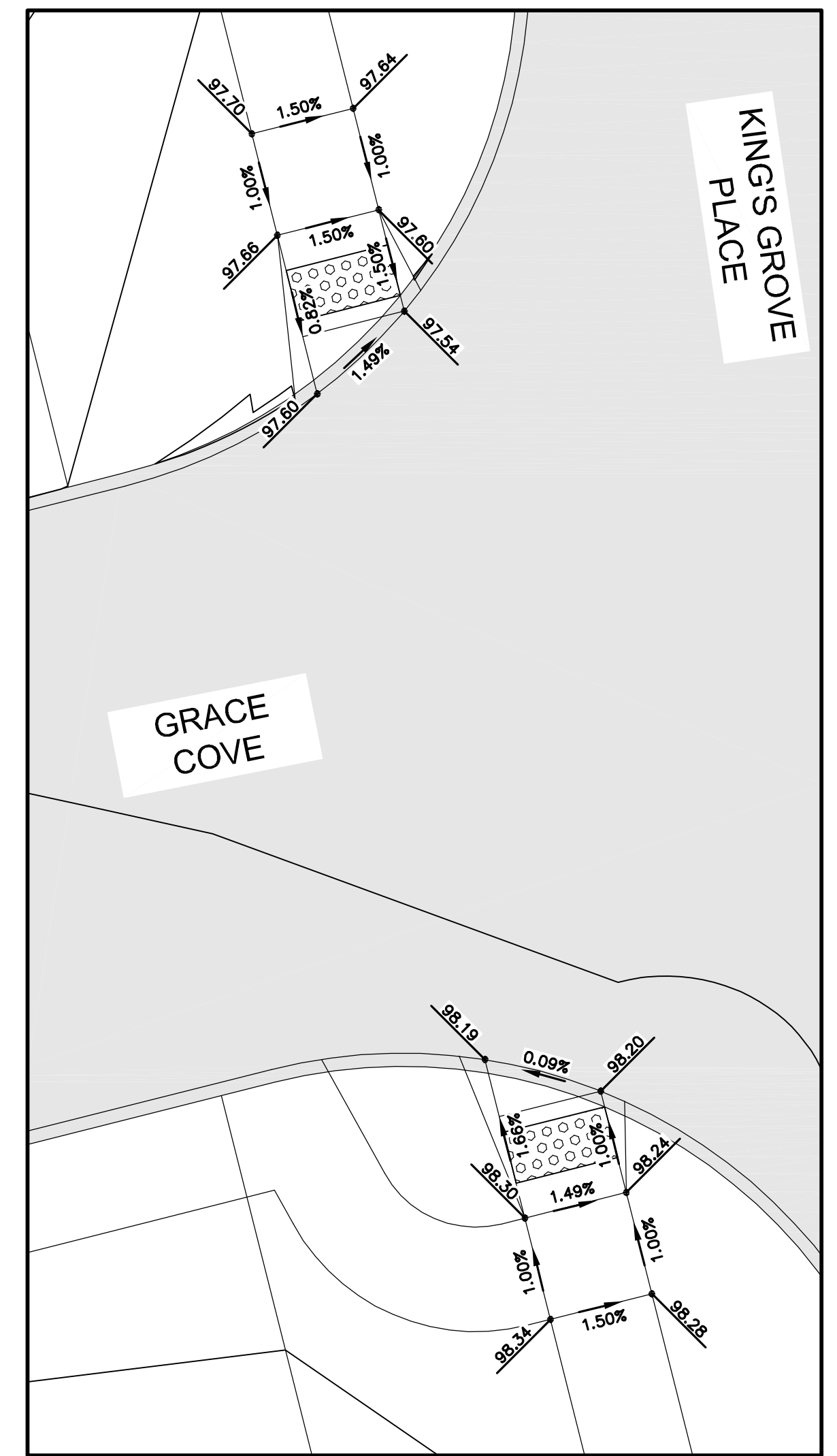




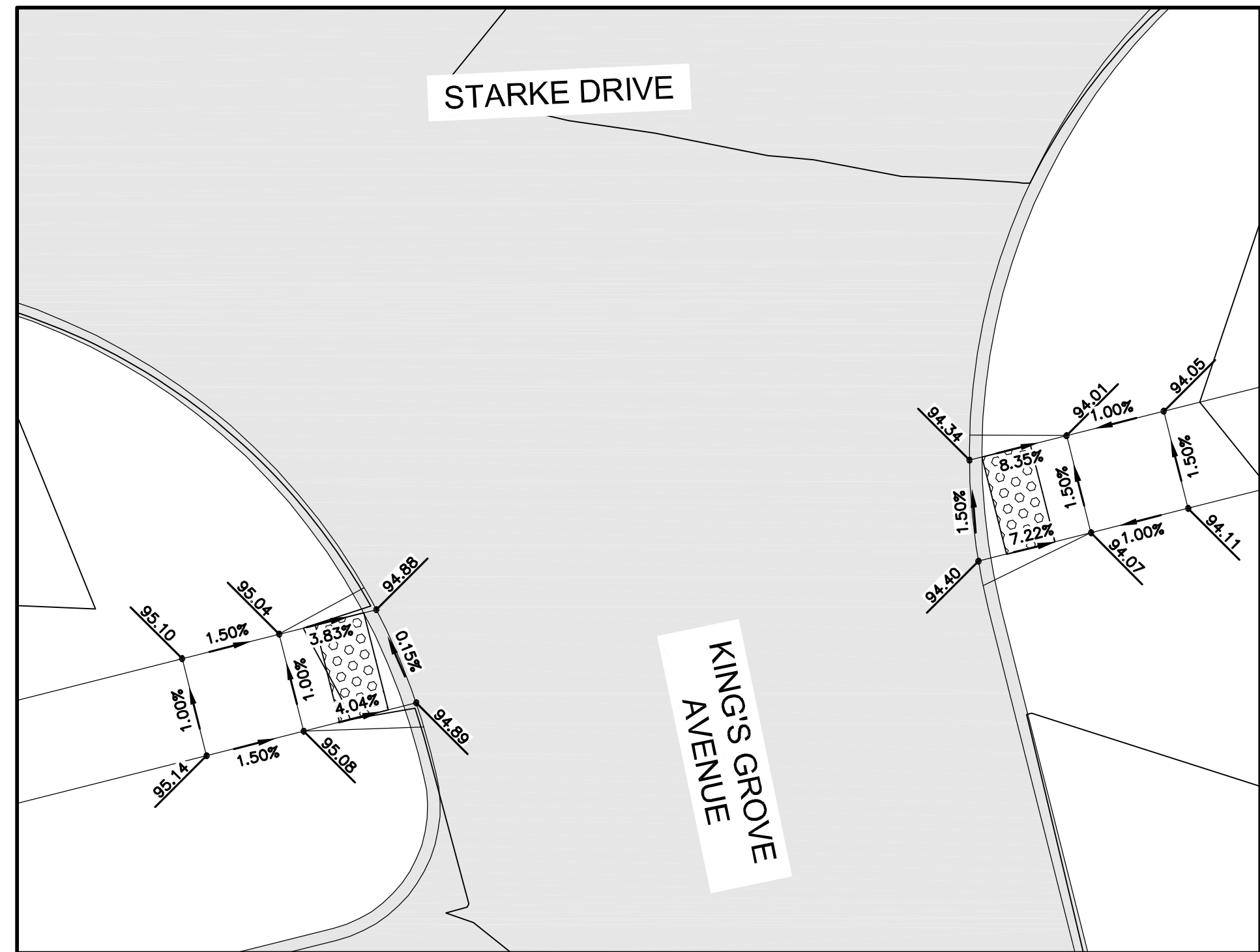
SIDEWALK RAMP  
DETAIL 1



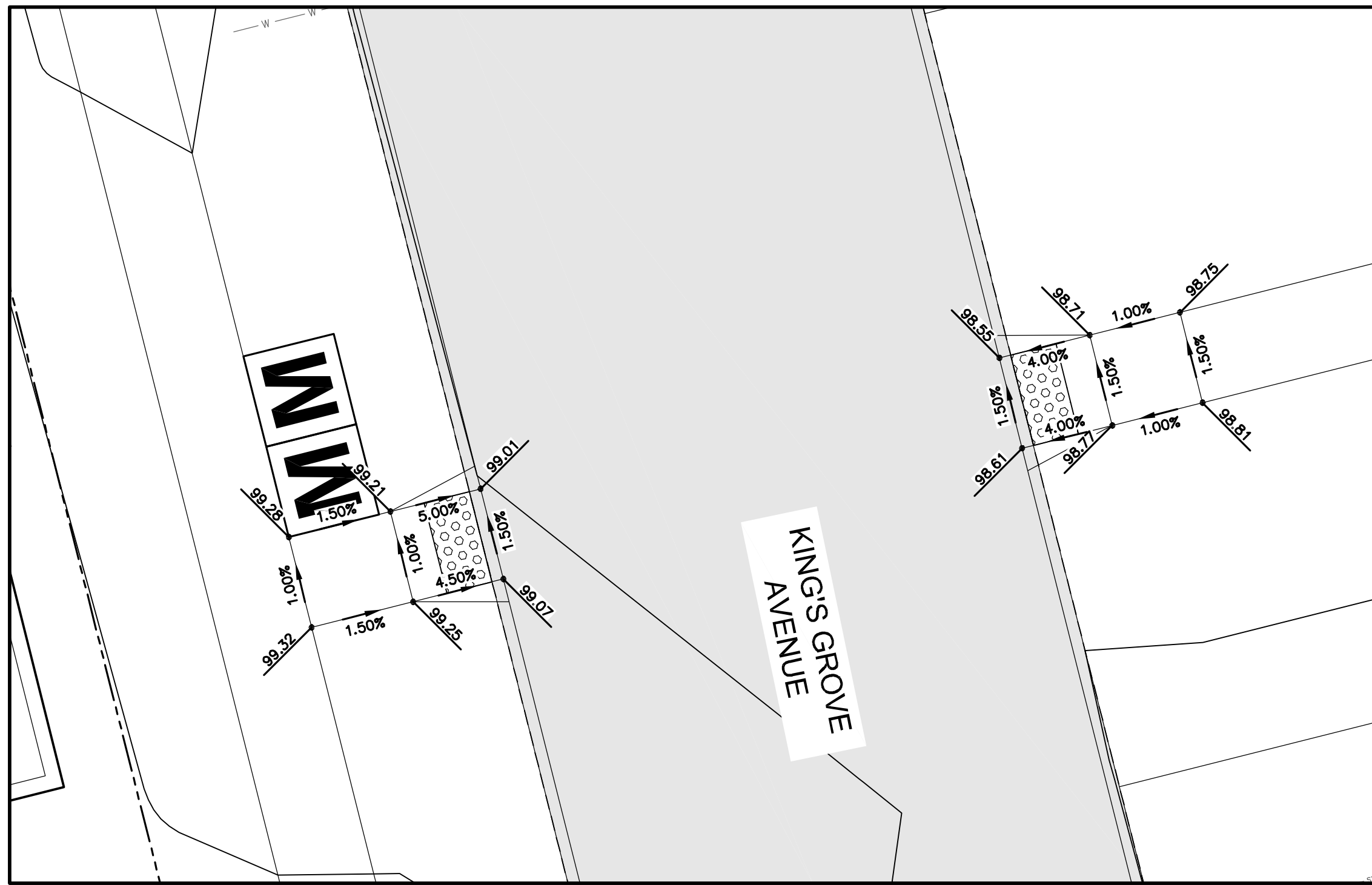
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DETAIL 2



SIDEWALK RAMP  
DETAIL 3



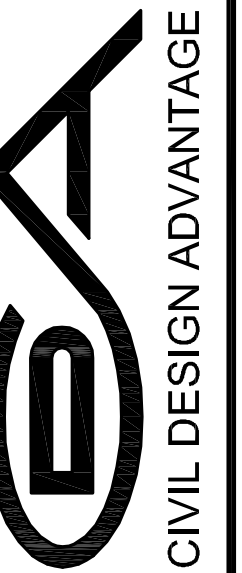
SIDEWALK RAMP  
DETAIL 4



SIDEWALK RAMP  
DETAIL 5

REVISIONS	DATE
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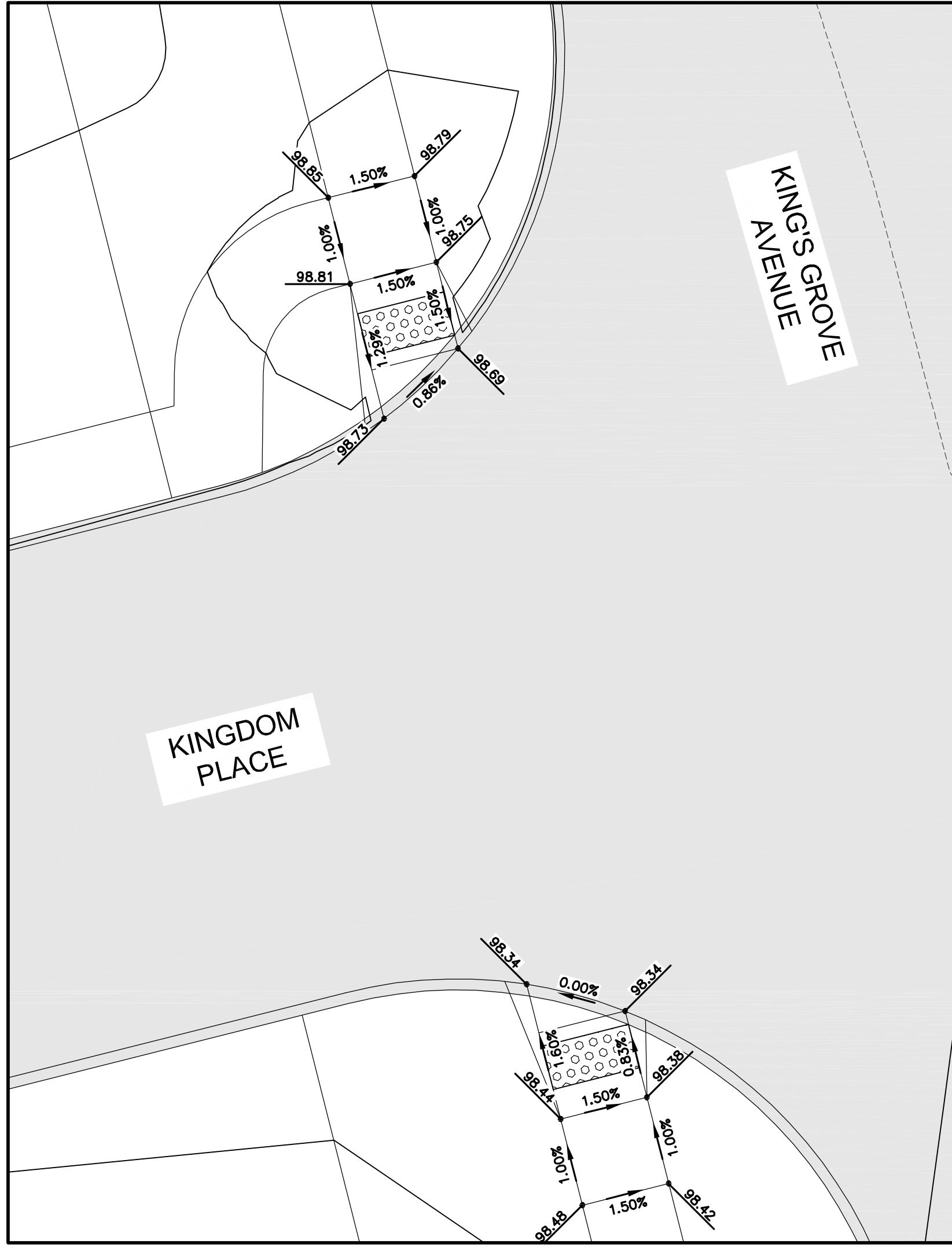


WEST DES MOINES, IOWA

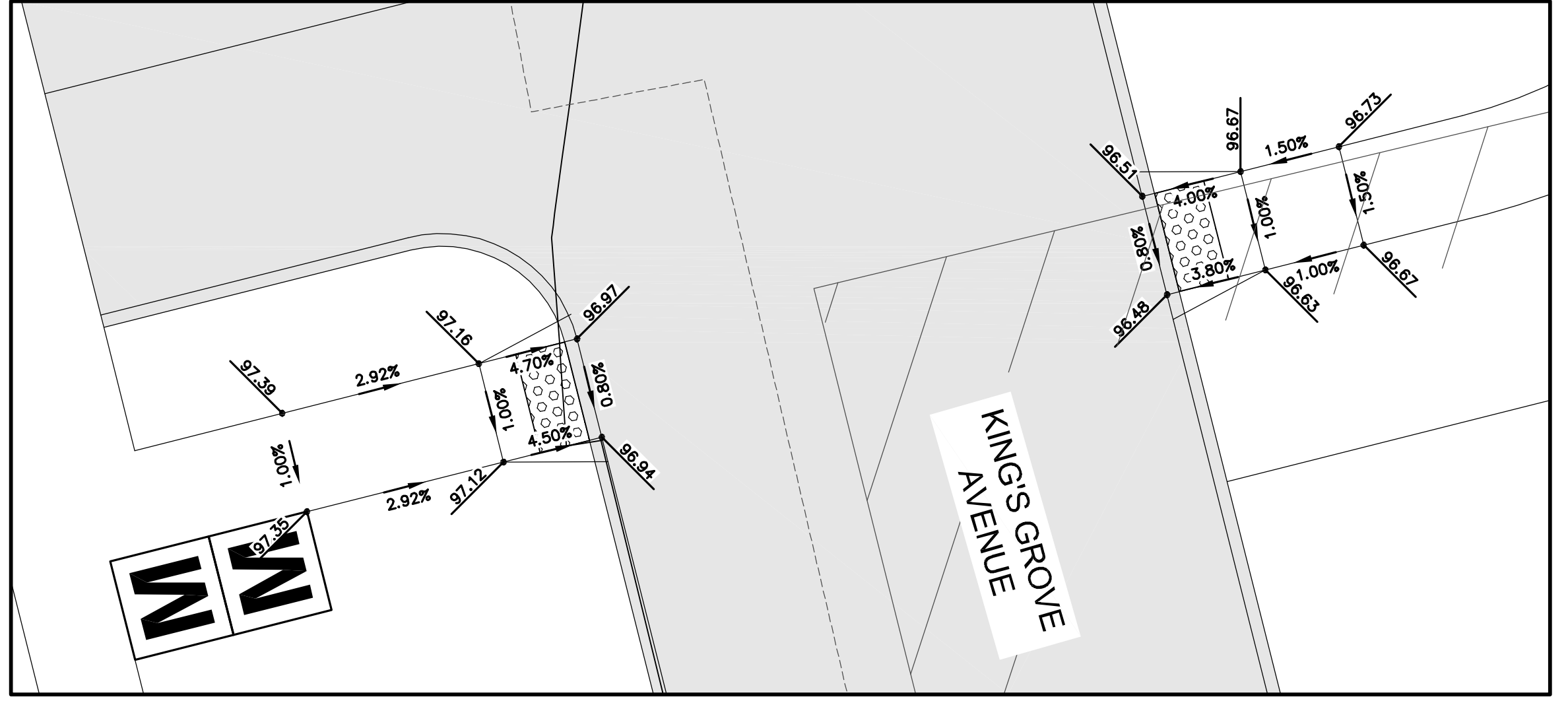
# KING'S GROVE TOWNHOMES

## GRADING PLAN

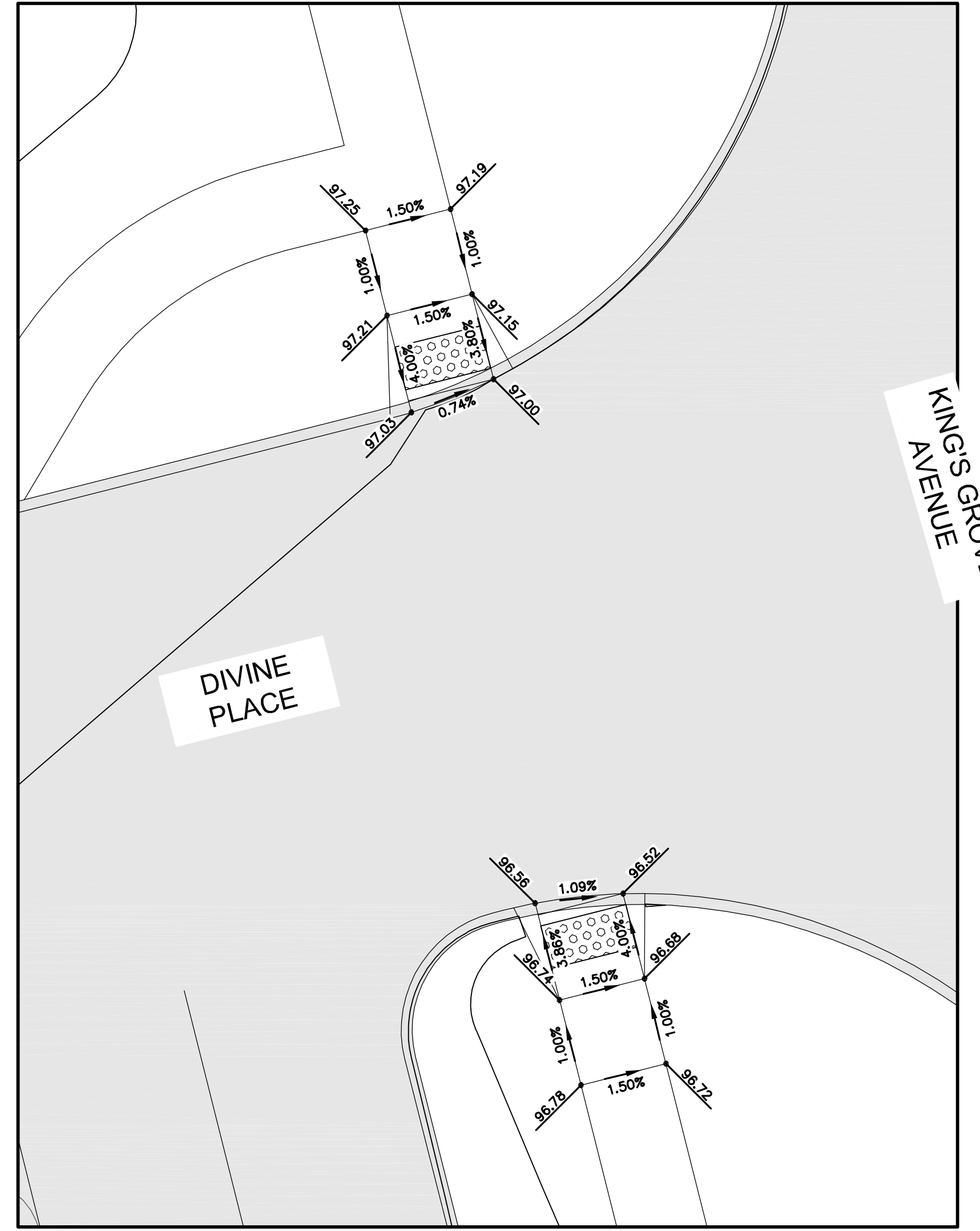




SIDEWALK RAMP  
 DETAIL 6



SIDEWALK RAMP  
 DETAIL 7



SIDEWALK RAMP  
 DETAIL 8

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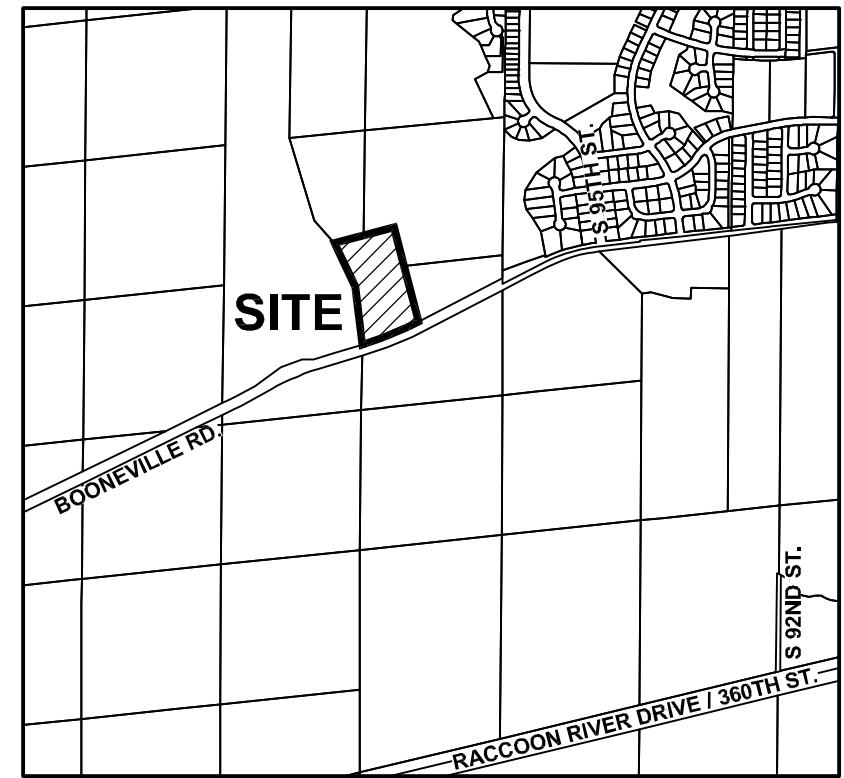


# KING'S GROVE TOWNHOMES

## EROSION AND SEDIMENT CONTROL PLAN

### VICINITY MAP

NOT TO SCALE



WEST DES MOINES, IOWA

### STABILIZATION QUANTITIES

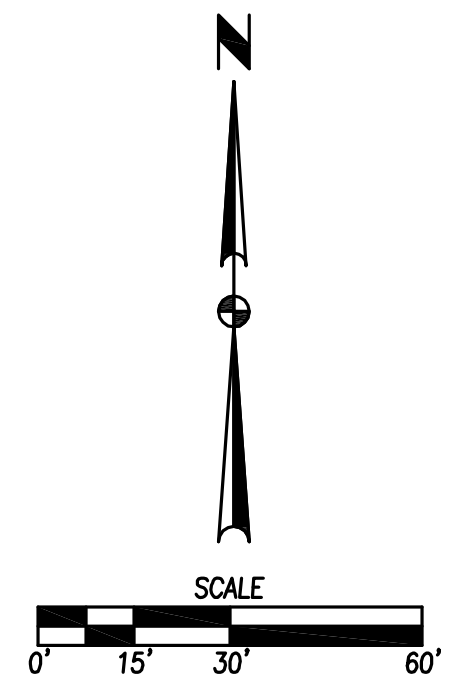
ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	5,125
2	SEEDING, FERTILIZING, AND MULCHING	AC	7.45
3	INLET PROTECTION DEVICES	EA	5
4	CONCRETE WASHOUT PIT	EA	1
5	12" PVC OR HDPE STANDPIPE	EA	1
6	TYPE 1 TURF REINFORCEMENT MAT	SY	4,000

### 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

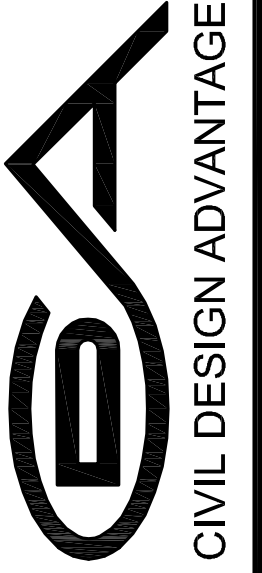
DISCHARGE POINT #1 TO SUGAR CREEK ±1100 FT	
TOTAL AREA DISTURBED TO DISCHARGE POINT	12.14 ACRES
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)	43,704 CU FT
VOLUME PROVIDED IN SILT FENCE (5,125 LF @ 4.5 CU FT/LF OF FENCE)	23,062 CU FT
VOLUME PROVIDED IN TSD #1	174,024 CU FT
TOTAL VOLUME PROVIDED	197,086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



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



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 ENGR: [REDACTED]  
 PLOTTED BY: ANGELO MURRAY  
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INSTALL 31,000 SF OF TEMPORARY TYPE 1 TURF REINFORCEMENT MAT

UNDISTURBED AREA

UNDISTURBED AREA

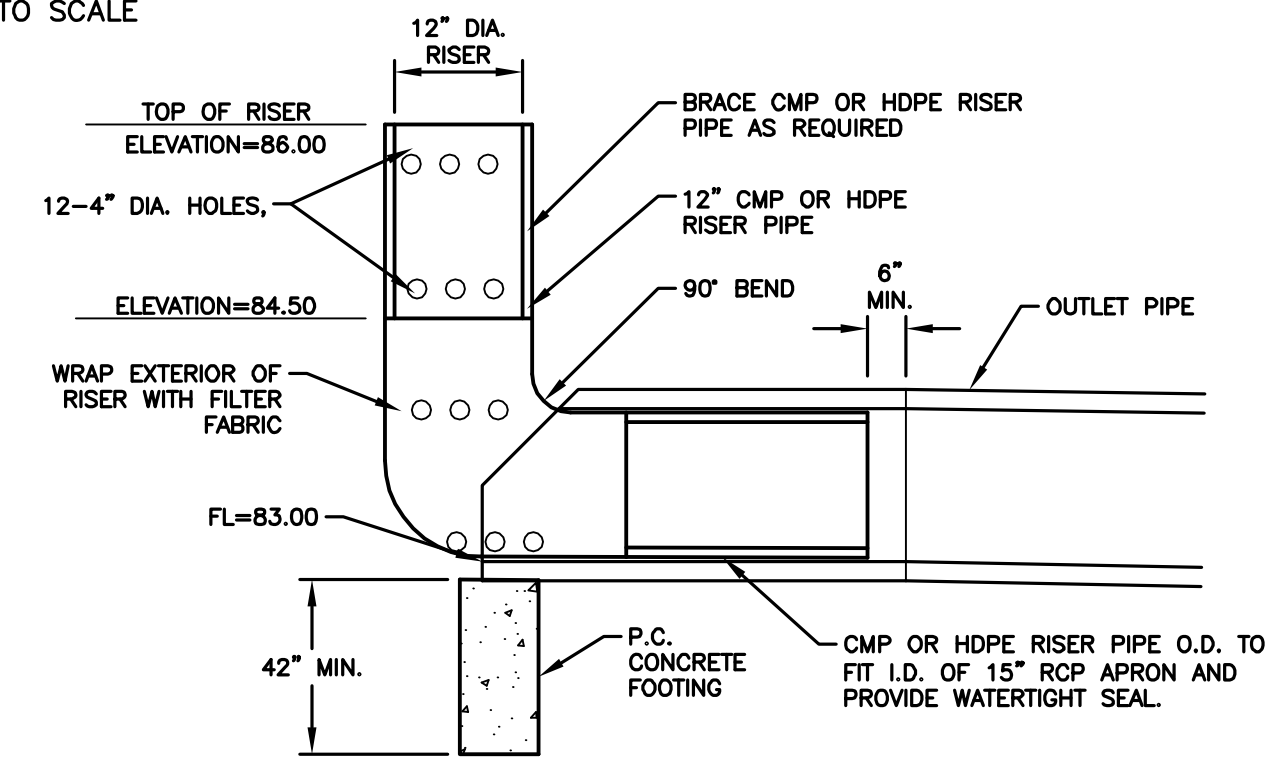
UNDISTURBED AREA

UNDISTURBED AREA

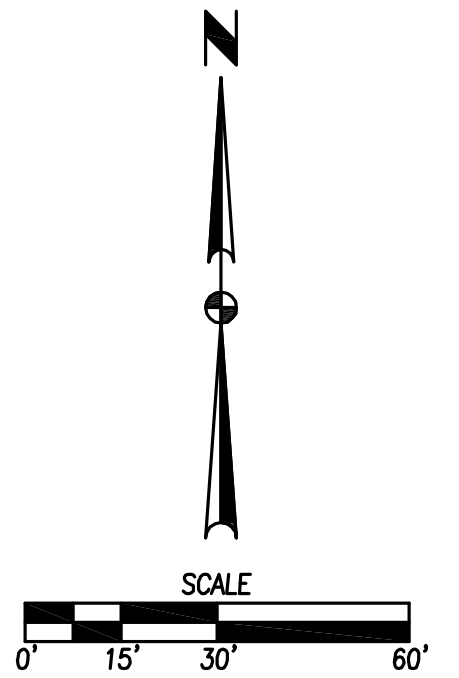
UNDISTURBED AREA

**TEMPORARY STAND PIPE DETAIL**

NOT TO SCALE

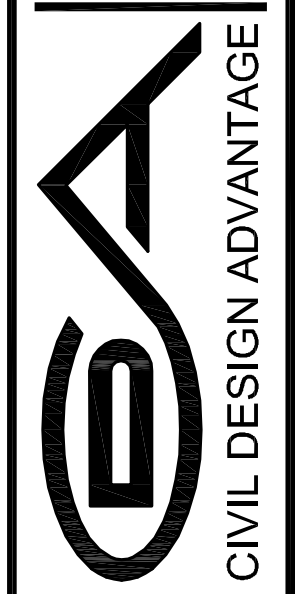


GRAVEL CONSTRUCTION EXIT  
 3" CRUSHED STONE  
 6" MINIMUM DEPTH  
 & 150' MINIMUM LENGTH



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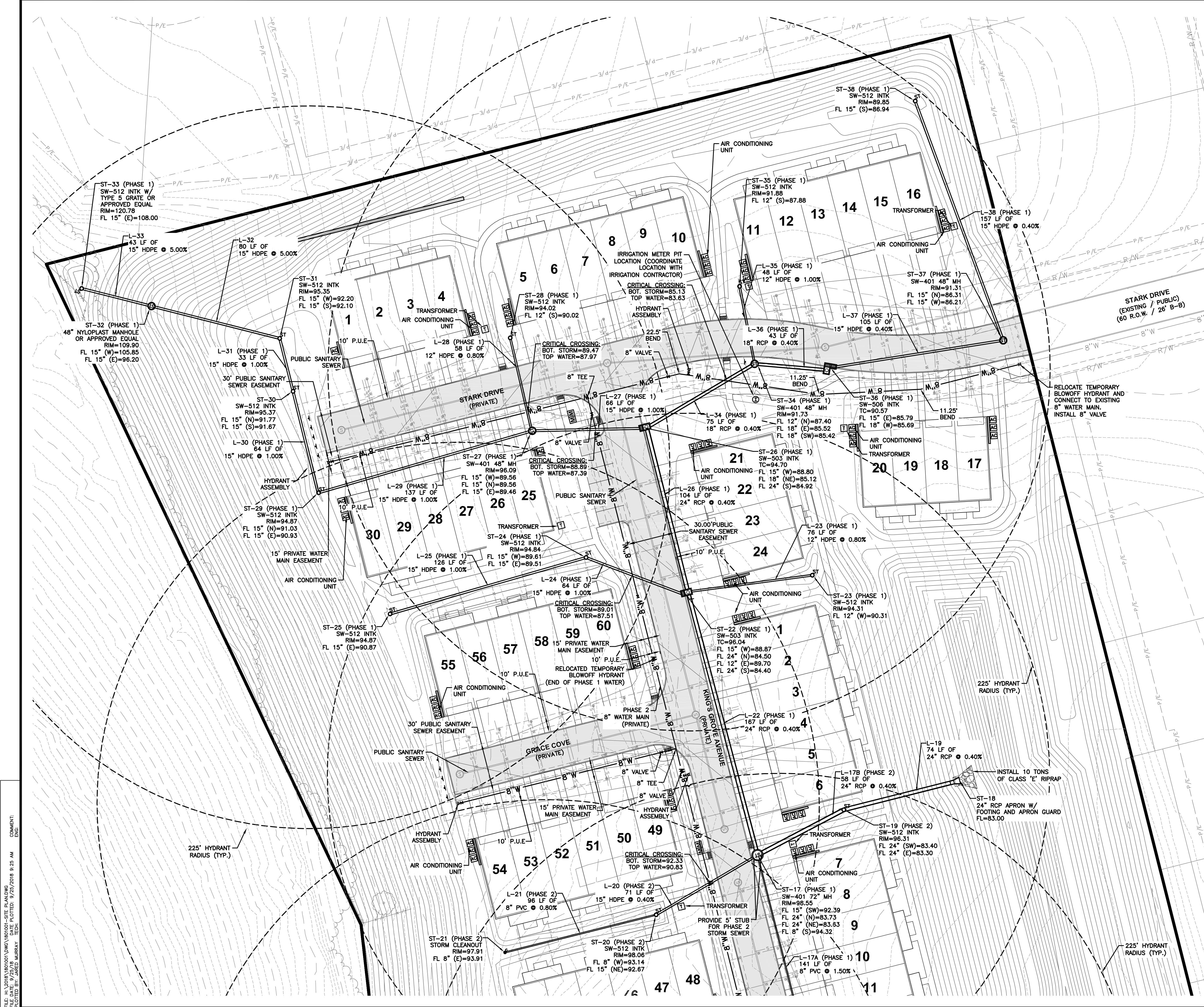
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**KING'S GROVE TOWNHOMES**  
 EROSION AND SEDIMENT CONTROL PLAN  
 WEST DES MOINES, IOWA

ENGINEER: EKO  
 EI: GH





**UTILITY NOTES**

- REFER TO MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR UTILITY SERVICE SIZES AND EXACT LOCATIONS. REFER TO ELECTRICAL PLANS FOR ELECTRIC AND TELEPHONE SERVICE CONSTRUCTION DETAILS. REFER TO MECHANICAL PLANS FOR GAS SERVICE CONSTRUCTION DETAILS.
- FIELD VERIFY ELEVATIONS AND LOCATIONS OF ALL CONNECTIONS TO EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
- PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETE.
- ALL UTILITIES SHALL BE STUBBED TO 5 FEET FROM BUILDINGS. REFER TO MEP PLANS FOR DESIGN FROM 5' OUTSIDE OF BUILDING FACE.
- ADJUST ALL MANHOLES AND INTAKES TO FINISHED GRADES.
- ALL SANITARY SEWER AND WATER SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF WEST DES MOINES PLUMBING CODE.
- 12" MINIMUM VERTICAL CLEARANCE BETWEEN STORM SEWER AND SANITARY SEWER PIPES. 18" MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY SEWER AND WATER MAIN. SEWER PIPES OVER WATER PIPES NEED TO MEET IOWA DNR MATERIAL REQUIREMENTS.
- MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND WATER MAINS.
- WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS. THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK. THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY ONE-CALL SERVICE AT 800-292-8989 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.
- PRIVATE UTILITIES TO BE INSTALLED PER THE CITY OF WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2012 UNIFORM PLUMBING CODE. CONTACT BUILDING INSPECTION A MINIMUM OF 24 HOURS IN ADVANCE FOR UTILITY INSTALLATION INSPECTIONS.
- OWNER IS RESPONSIBLE FOR MAINTENANCE OF PRIVATE UTILITIES.
- CONTRACTOR SHALL PREVENT ENTRY OF MUD, DIRT, DEBRIS AND OTHER MATERIAL INTO NEW AND EXISTING SEWER SYSTEMS. SHOULD ANY CONTAMINATION OCCUR DURING CONSTRUCTION, THE CONTRACTOR SHALL CLEAN AT NO COST TO THE OWNER. INSTALL SILT FENCE AT ALL PERMANENT STORM SEWER INLETS.
- ALL STORM SEWER APRONS SHALL HAVE FOOTINGS AND APRON GUARDS.

**WEST DES MOINES WATER WORKS NOTES**

- ALL WATER WORK SHALL BE DONE IN ACCORDANCE WITH WEST DES MOINES WATER WORKS STANDARD SPECIFICATIONS.
- CONTRACTOR SHALL NOTIFY WEST DES MOINES WATER WORKS AT LEAST ONE WEEK PRIOR TO CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.
- CONTACT BUILDING INSPECTION (515-222-3630) A MINIMUM OF 24 HOURS IN ADVANCE FOR PRIVATE UTILITY INSPECTIONS.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE WEST DES MOINES WATER WORKS AND CITY'S CROSS-CONNECTION CONTROL/CONTAINMENT PROVISION.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION OF AN APPROVED BACKFLOW PREVENTION ASSEMBLY(S) FOR CONTAINMENT IN ALL NEW CONSTRUCTION. BACKFLOW PREVENTION TO BE INSTALLED PER CITY ORDINANCE 1297, 54-1998. CONTRACTOR SHALL NOTIFY WEST DES MOINES WATER WORKS, RALPH RENTERIA, ENGINEERING TECHNICIAN (515)-222-3465 A MINIMUM OF 24 HOURS AFTER INSTALLATION AND TESTING OF ALL BACKFLOW DEVICES TO SCHEDULE FINAL INSPECTION.
- BUILDING FIRE SPRINKLER AND FIRE ALARM SYSTEM SHALL BE DESIGNED PER WEST DES MOINES FIRE CODE.
- WATER SHALL BE PROVIDED TO PROPERTY VIA PRIVATE WATER MAIN. OWNER SHALL ALLOW WEST DES MOINES WATER WORKS ACCESS TO THE METERS AND VALVES AS NEEDED FOR EMERGENCY MAINTENANCE AND SHUT OFF IN THE EVENT OF NON-PAYMENT.
- AN EXISTING WELL, LOCATED TO THE SOUTHEAST, SERVES THIS PROPERTY. THIS WELL SHOULD BE ABANDONED IN ACCORDANCE WITH ALL APPLICABLE COUNTY AND STATE RULES. CONTACT DALLAS COUNTY ENVIRONMENTAL HEALTH FOR ADDITIONAL INFORMATION.
- THE EXISTING STARK DRIVE WATER MAIN WILL BECOME A PRIVATE WATER MAIN AND THE RESPONSIBILITY OF THE DEVELOPMENT SINCE THIS SEGMENT OF WATER MAIN WILL ONLY SERVE ONE USER. THE OWNERSHIP WILL TRANSFER FROM PUBLIC TO PRIVATE AT THE 8'x12" TEE.

**LIGHTING NOTES:**

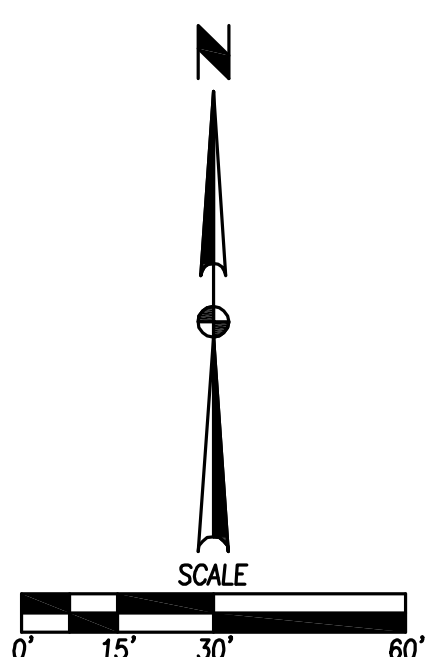
SEE LIGHTING PLAN (PHOTOMETRIC PLAN) FOR MORE INFORMATION.  
 ALL LIGHTING MUST BE DOWN-CAST, CUT-OFF TYPE FIXTURES. WALL PACK LIGHT WITHOUT SHIELDS TO DIRECT LIGHT DOWN TO ITS INTENDED TARGET ARE PROHIBITED.

**NOTE:**  
 REFER TO THE APPROVED PUBLIC IMPROVEMENT PLANS FOR CONSTRUCTION OF THE PUBLIC SANITARY SEWER.

**NOTE:**  
 CONTRACTOR SHALL COORDINATE ALL TRANSFORMER PAD LOCATIONS, INCLUDING BUILDING SEPARATION, WITH MID AMERICAN ENERGY PRIOR TO TRANSFORMER PAD CONSTRUCTION.

**PRIVATE WATER MAIN QUANTITIES**

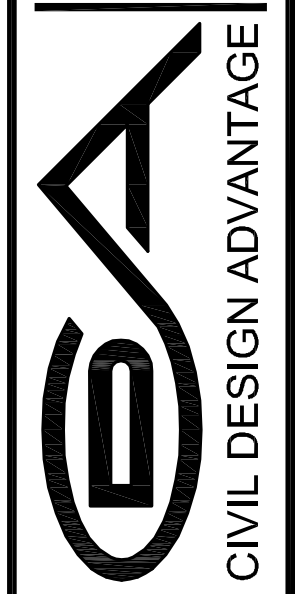
PHASE 1:	
HYDRANT ASSEMBLY	2 EA
TEMPORARY BLOW-OFF HYDRANT	1 EA
8" VALVE	4 EA
8" WATER MAIN	618 LF
PHASE 2:	
HYDRANT ASSEMBLY	6 EA
RELOCATE BLOW-OFF HYDRANT	1 EA
8" VALVE	7 EA
8" WATER MAIN	1,173 LF



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 TOWN: KING'S GROVE

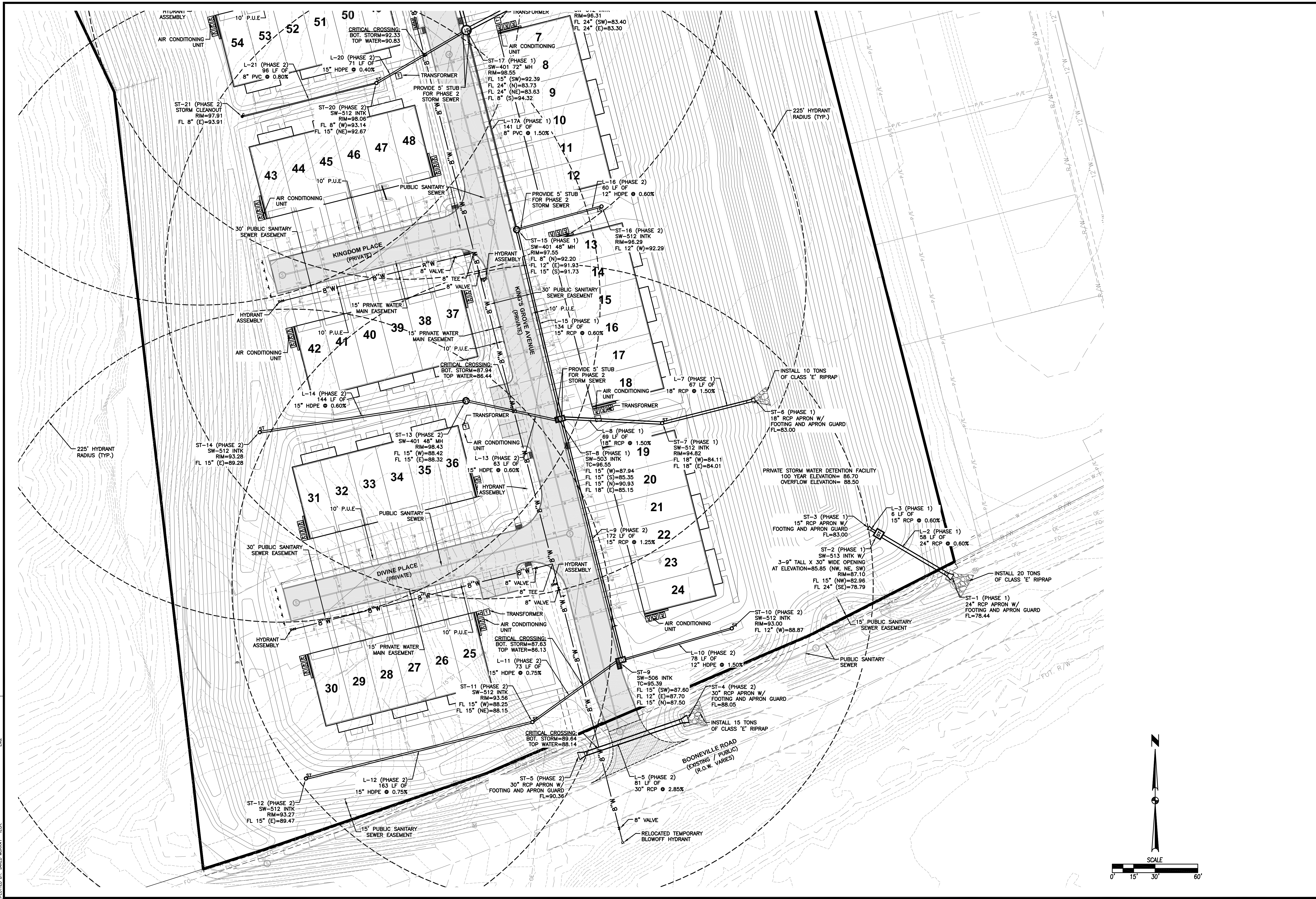
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 EI: GH





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 PLOTTED BY: JARED MURRAY  
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**KING'S GROVE TOWNHOMES**  
 UTILITY PLAN

WEST DES MOINES, IOWA

ENGINEER: EKO  
 EI: GH

7.1

1801.001



**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**

1. LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
2. ALL CONSTRUCTION SHALL CONFORM TO THE MOST RECENT EDITION OF THE WEST DES MOINES STANDARDS FOR SUBDIVISIONS.
3. TYPE, SIZE AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1.
4. 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.
5. SOD ALL AREAS ADJACENT TO BUILDINGS, SEED (TYPE 1) OR SOD ALL OTHER DISTURBED AREAS AS DIRECTED BY OWNER.
6. BACKFILL TO TOP OF CURB. (MINUS 1 1/2" FOR SOD, IF REQ.)
7. WEED PREVENTER(PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING IN ALL PLANTING BEDS PER MANUFACTURER'S RECOMMENDATIONS.
8. 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.
9. ALL EDGING SHALL BE 3/16" STEEL EDGING.
10. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY, THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
11. ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY.
12. CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.
13. CONTRACTOR SHALL PROVIDE IRRIGATION DESIGN TO OWNER FOR APPROVAL.
14. 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 = 260  
EVERGREENS REQUIRED = 91 (35%)  
EVERGREENS PROVIDED = 99 (38%)

**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 = 127,155 SF (25%)  
OPEN SPACE PROVIDED = 321,994 SF (63%)
- TREES REQUIRED = 85  
TREES PROVIDED = 88
- SHRUBS REQUIRED = 128  
SHRUBS PROVIDED = 135

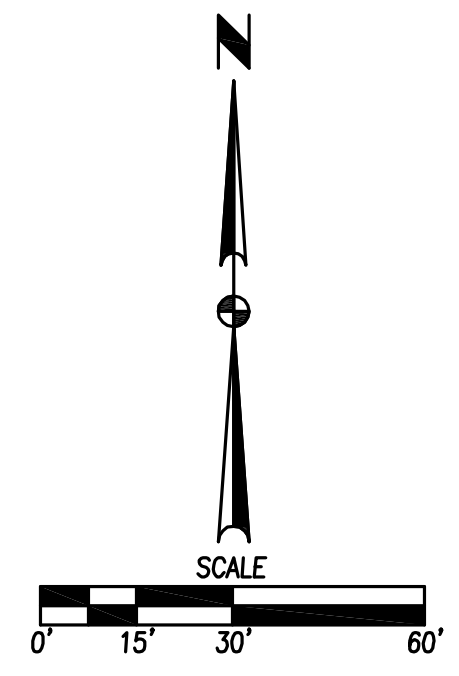
**NORTH BUFFER PLANT SCHEDULE**

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	Cercis canadensis	B&B	1"
MP	10	Prairifire Crab Apple	Malus x 'Prairifire'	B&B	1"
MS	5	Spring Snow Crab Apple	Malus x 'Spring Snow'	B&B	1"
PG	6	Colorado Blue Spruce	Picea pungens 'Glauca'	B&B	6"
PN	8	Newport Flowering Plum	Prunus cerasifera 'Newport'	B&B	1"
PD	8	Douglas Fir	Pseudotsuga menziesii	B&B	6"
SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONT	HT.
CI	10	Isanti Redstart Dogwood	Cornus sericea 'Isanti'		36"
EC	10	Compact Burning Bush	Euonymus alatus 'Compactus'		24"
JF	41	Sea Green Juniper	Juniperus chinensis 'Sea Green'		24"
SK	13	Miss Kim Korean Lilac	Syringa pubescens 'Miss Kim'		24"
VD	10	Arrowwood Viburnum	Viburnum dentatum 'Arrowwood'		36"
VL	5	Nannyberry	Viburnum lentago		36"
VA	10	American Cranberrybush	Viburnum trilobum		36"

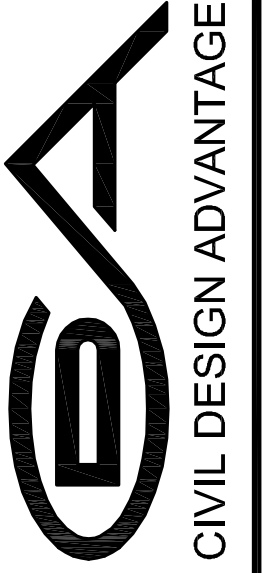
**EAST BUFFER #1 PLANT SCHEDULE**

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	Cercis canadensis	B&B	1.5"
MP	3	Prairifire Crab Apple	Malus x 'Prairifire'	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"
SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONT	HT.
CI	3	Isanti Redstart Dogwood	Cornus sericea 'Isanti'		36"
JF	11	Sea Green Juniper	Juniperus chinensis 'Sea Green'		24"
VL	3	Nannyberry	Viburnum lentago		36"
VA	3	American Cranberrybush	Viburnum trilobum		36"

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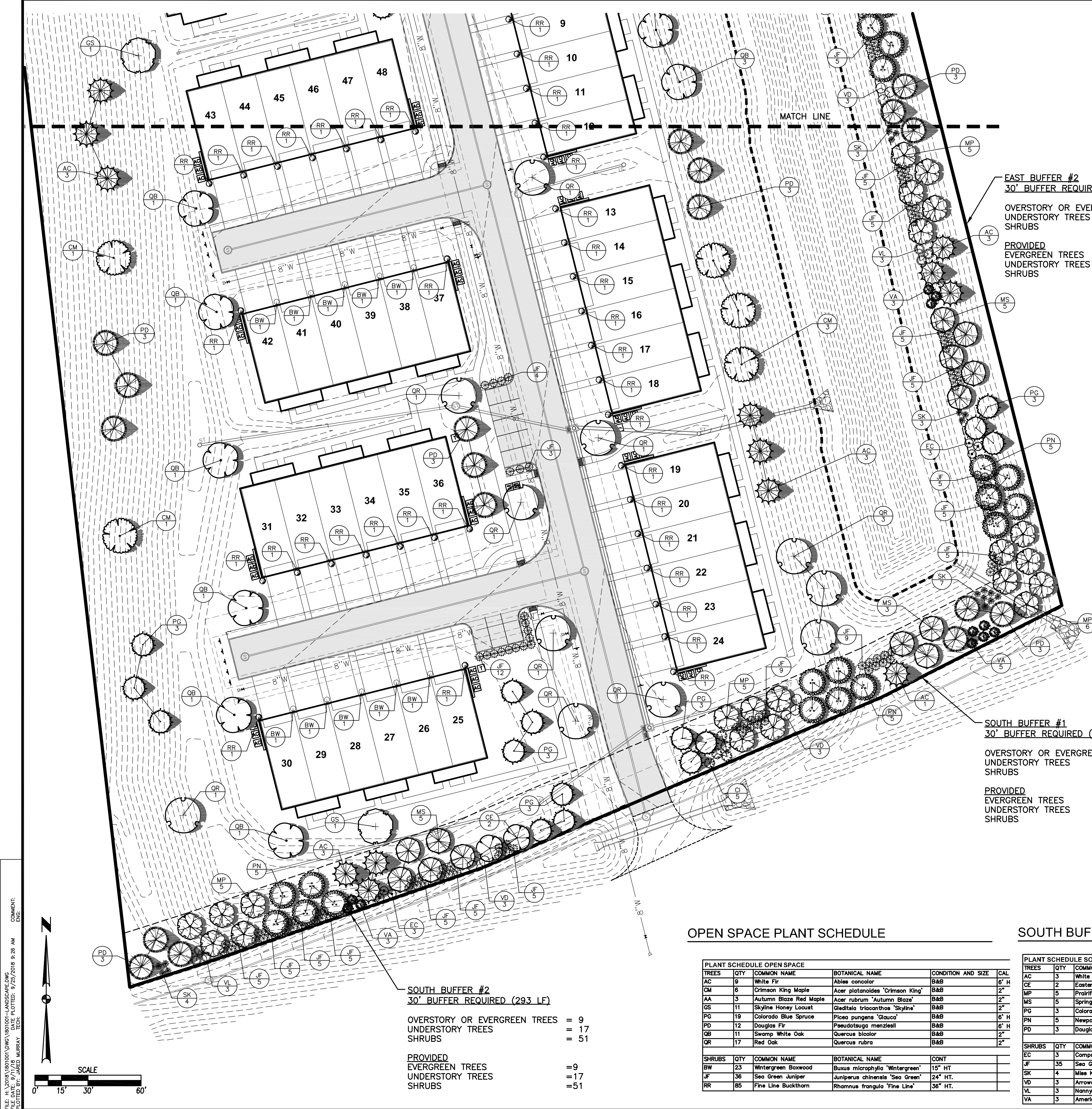


3405 S.E. CROSSROADS DRIVE, SUITE G  
GRIMES, IOWA 50111  
PHONE: (515) 369-4400 FAX: (515) 369-4410  
ENGINEER: EKO



**KING'S GROVE TOWNHOMES**  
LANDSCAPE PLAN  
WEST DES MOINES, IOWA





**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 Crab Apple	Malus x 'Prairifire'	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 'Glauco'	B&B	6'
PN	10	Newport Flowering Plum	Prunus cerasifera 'Newport'	B&B	1.5'
PD	6	Douglas Fir	Pseudotsuga menziesii	B&B	6'

SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONT
CI	8	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	8	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' HT.
MP	5	Prairie Crab Apple	Malus x 'Prairifire'	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' HT.
PN	5	Newport Flowering Plum	Prunus cerasifera 'Newport'	B&B	1.5'
PD	3	Douglas Fir	Pseudotsuga menziesii	B&B	6' HT.

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)

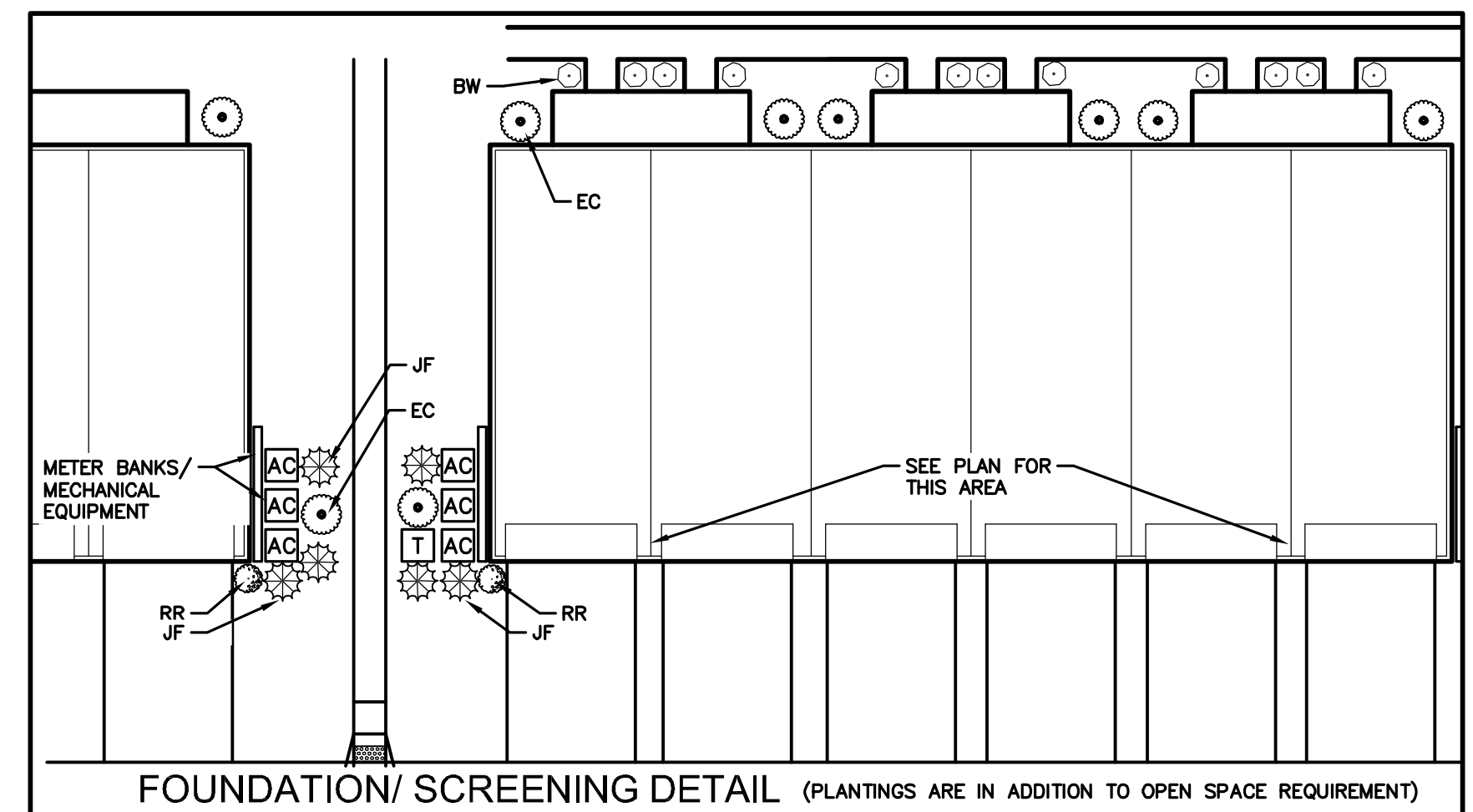
OVERSTORY OR EVERGREEN TREES = 21  
UNDERSTORY TREES = 41  
SHRUBS = 123

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



**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	5	Crimson King Maple	Acer platanoides 'Crimson King'	B&B	2"
AA	5	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 'Glauco'	B&B	6' H
PD	12	Douglas Fir	Pseudotsuga menziesii	B&B	6' H
QB	11	Swamp White Oak	Quercus bicolor	B&B	2"
QR	17	Red Oak	Quercus rubra	B&B	2"

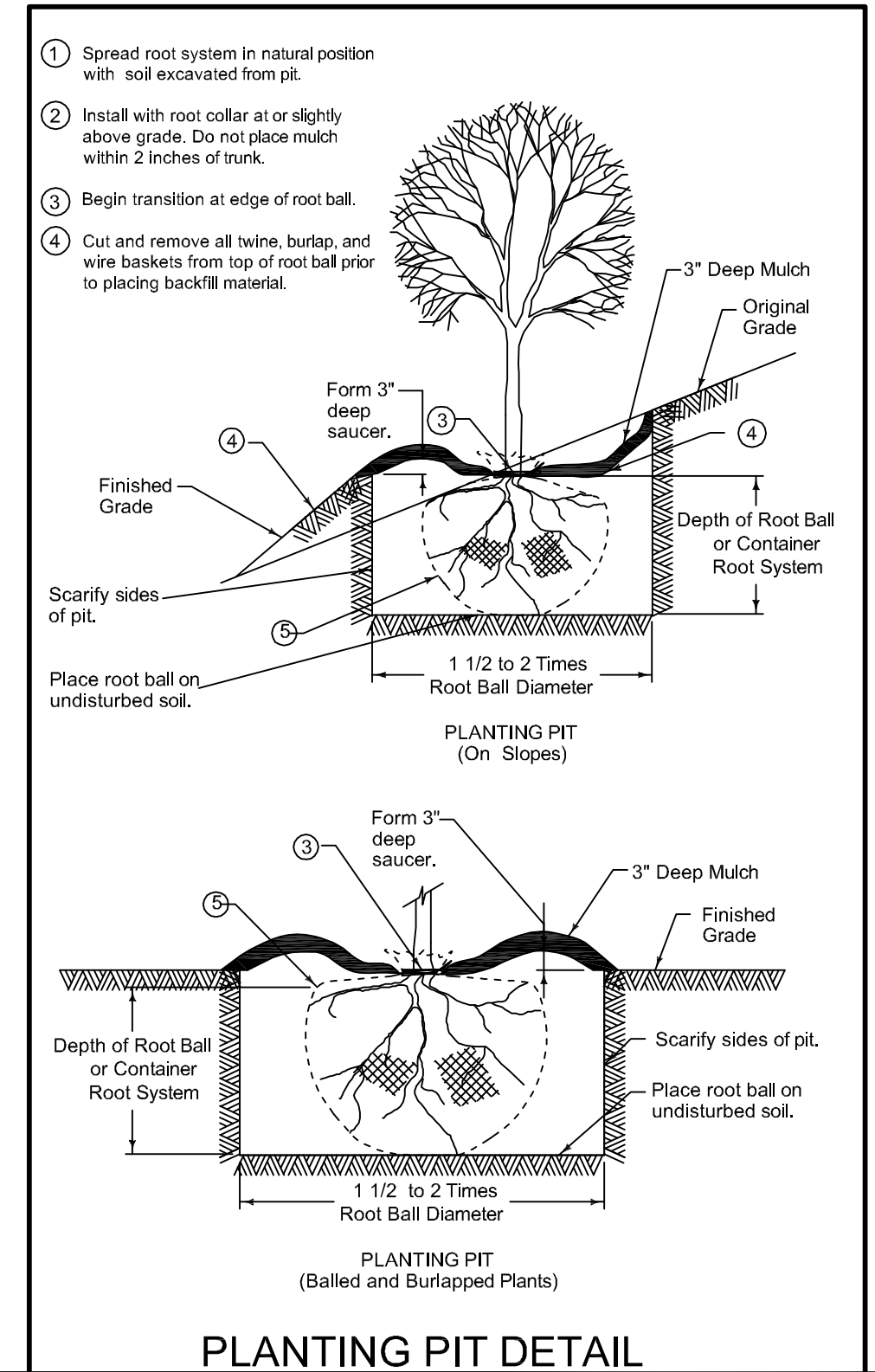
SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONT
BW	23	Wintergreen Boxwood	Buxus microphylla 'Wintergreen'	15" HT
JF	36	Sea Green Juniper	Juniperus chinensis 'Sea Green'	24" HT.
RR	85	Fine Line Buckthorn	Rhamnus frangula 'Fine Line'	36" HT.

**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 Crab Apple	Malus x 'Prairifire'	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 'Glauco'	B&B	6'
PN	5	Newport Flowering Plum	Prunus cerasifera 'Newport'	B&B	1.5'
PD	3	Douglas Fir	Pseudotsuga menziesii	B&B	6'

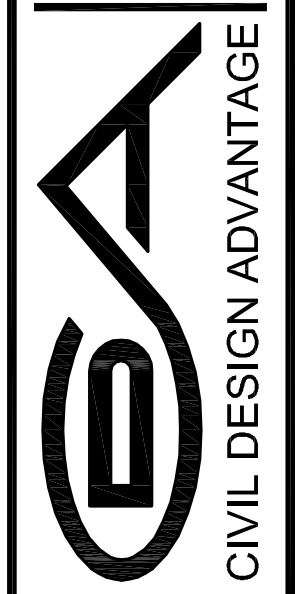
SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONT
EC	3	Compact Burning Bush	Euonymus alatus 'Compactus'	24" HT.
JF	35	Sea Green Juniper	Juniperus chinensis 'Sea Green'	24" HT.
SK	4	Miss Kim Korean Lilac	Syringa pubescens 'Miss Kim'	24" HT.
VD	3	Arrowwood Viburnum	Viburnum dentatum 'Arrowwood'	36" HT.
VL	3	Nannyberry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



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REVISIONS	DATE	DESCRIPTION
FINAL CITY SUBMITTAL	09/24/18	
CITY SUBMITTAL #4	08/20/18	
CITY SUBMITTAL #3	07/31/18	
CITY SUBMITTAL #2	07/06/18	
CITY SUBMITTAL #1	05/25/18	

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



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