NOTICE OF PUBLIC MEETING

Governmental Body: Van Meter Planning and Zoning Commission
Date of Meeting: Monday September 13th, 2021
Time/Location of Meeting: 5:30 PM – City Hall, 310 Mill Street

Agenda:

1. Call to Order/Roll Call
2. Approval of Agenda
3. Approval of Minutes – 8-2-2021
4. Discussion and Action – Grand Ridge Estates Townhomes Preliminary Plat and Site Plan
5. Discussion and Action – 36093 Tabor Road Plat of Survey
6. Adjournment

Posted this 10th day of September 2021

Meeting Minutes

Governmental Body: Van Meter Planning and Zoning Commission
Date of Meeting: Monday, August 2nd, 2021
Time/Location of Meeting: 5:30 PM – 310 Mill Street

Agenda:

1. Call to Order/Roll Call
   Wahlert called the meeting to order at 5:36
   Roll was called: Harrison, Hulse, Wahlert, Akers, Bruins, DeVore, Feldman present.
   Staff present included City Administrator Kyle Michel
2. Approval of Agenda
   Wahlert moved, supported by Feldman, to approve the agenda as published. Motion carried unanimously.
3. Approval of Minutes –6-7-2021 Meeting Minutes
   Wahlert moved, supported by Akers, to approve the minutes. Motion carried unanimously.
4. Discussion and Action: Grand Ridge Estates Plat 1 Final Plat
   Paul Clausen, CEC, was present to provide an overview of the Final Plat submittal. City Engineer Veenstra's comments were included in the packet for review.
   Akers moved, supported by Feldman, to recommend approval to Council as submitted. Motion carried unanimously.
5. Discussion and Action: Liberty Ready Mix Plat of Survey and Site Plan
   JD Dalton and Dan Southwick were present to present the proposed Liberty Ready Mix plant. City Engineer Veenstra's comments were provided in the packet for review.
   City Administrator Michel provided additional context regarding the annexation efforts occurring north of the Raccoon River.
   Hulse moved, supported by Feldman, to recommend approval to City Council of the Plat of Survey as submitted and approval of the Site Plan subject to seeing a lighting plan and buffering plan for County Highway R16. Motion carried. Wahlert passed citing employment with Bishop Engineering, the project engineer, as a conflict.
6. Discussion and Action: Urban Renewal Plan Amendment Re. Trindle Ridge
   City Administrator Michel introduced the proposed plan amendment and the requirement of the Planning & Zoning Commission to review the proposed amendment for conformance with the overall Urban Renewal Plan of the City of Van Meter. City Administrator Michel discussed the proposed public and private projects occurring as part of the Trindle Ridge development project and the costs associated with each.
   Akers moves, supported by Feldman, to recommend approval of the proposed Urban Renewal Plan Amendment to the City Council. Motion carried. Bruins no.
7. Adjournment
   Motion by Wahlert, supported by Akers, to adjourn the meeting. Motion carried unanimously.
   The meeting was adjourned at 6:19 pm.

VEENSTRA & KIMM, INC.
3000 Westown Parkway • West Des Moines, Iowa 50266-1320
515-225-8000 • 515-225-7848 (FAX) • 800-241-8000 (WATS)

August 12, 2021

Kyle Michel
City Administrator
City of Van Meter
505 Grant Street
P.O. Box 160
Van Meter, Iowa 50261-0160

VAN METER, IOWA
GRAND RIDGE ESTATES TOWNHOMES
PRELIMINARY PLAT/SITE PLAN
REVIEW COMMENTS

The writer has completed a review of the initial submittal of the preliminary plat and site plan for Grand Ridge Estates Townhomes. The writer completed a review of the Stormwater Management Report prepared by Civil Engineering Consultants.

The project involves a 36 unit townhome development located on Lot 83 of Grand Ridge Estates Plat 1. Based on review the writer would note the following:

1. The submittal involves both a preliminary plat and a site plan. The development plan is to create 36 individual townhome lots with Outlot Z encompassing the balance of the property exclusive of the 36 individual townhome lots.

2. The project involves 18 separate bi-attached townhome units.

3. The preliminary plat indicates the existing zoning is R-3 multifamily and the proposed zoning would be Grand Estates PUD.

4. General Note 1 on Sheet 02 indicates construction is to be in accordance with the 2021 Edition of SUDAS. This note is satisfactory.

5. The streets within the project are shown to be private.

6. The project involves two private street approaches. The east approach is to Josie Drive. The south driveway is to Long Avenue west of Josie Drive. The locations of the private street access points are satisfactory.

7. The width of the streets is 24-foot back to back. In some areas there is a rolled curb and in other areas a full height curb. The rolled curb is generally used in areas where the townhome driveways concept to the private street.

8. The site plan shows 24 additional parking stalls located in two parking areas along the east and west side of the central loop street. The location of the additional parking stalls in relationship to the townhome units appears to be satisfactory.

9. The site plan shows a 5-foot sidewalk on the west side of Josie Drive and a 5-foot sidewalk on the north side of Long Avenue. The configuration of these two sidewalks appears to be satisfactory.

10. The sidewalk at the north end of Josie Drive terminates and there is no proposed crossing of R-16 as there is no sidewalk on the north side of R-16.

11. The sidewalk at the intersection of Josie Drive and Long Avenue includes access ramps for the sidewalks located on the opposite side of the intersection.

12. For the sidewalk on Long Avenue terminates at the west boundary for future extension as the property to the west develops.

13. The site plan shows 5-foot sidewalk located along the interior streets. Except in the area of the parking stalls the 5-foot sidewalk is located immediately behind the curb line.

14. The interior sidewalk includes ADA ramps at several private street crossings. Civil Engineering Consultants will need to review the configuration of the sidewalk ramps to ensure compliance with ADA from a geometric and configurational perspective.

15. Sanitary sewer is provided by a connection to the existing manhole on the north side of Long Avenue east of the new private street. The sewer continues west to the center of the private street and then along the private streets. The high point on the sewer is located at the northeast corner with the sewers extending from that point along the east and south legs and along the north and west legs to a manhole at the southwest corner of the interior loop street.

16. The sanitary sewer to the southwest corner of the loop street is shown as 8-inch diameter at a slope of 0.60%. This sanitary sewer is satisfactory.

17. The sanitary sewers around the loop street are shown as 6-inch at a slope of 1.5% to 1.57%.

18. The preliminary plat indicates the intent for the sanitary sewer to be public.

19. Historically the City has required public sewers to be 8-inch diameter. The City will need to decide if it will accept public 6-inch diameter sewers, if it will require the 6-inch sewer to be private or increased in size to 8-inch diameter to be a public sewer.

20. The storm sewer starts with an outlet on the west side of the private street connecting to Long Avenue. The storm sewer continues northerly along the west leg of the private street, with legs extending north and east and north along the southerly and easterly legs of the private street.

21. The preliminary plat shows the storm sewer to be public.

22. The preliminary plat/site plan shows a 10-foot wide paved cunette extending along the west boundary of the site. The concrete cunette flume will carry the runoff from the R-16 culvert to the storm sewer under Long Avenue near the southwest corner of the site.

23. The discharge from the storm sewer in the project is to a 6-foot wide concrete cunette/flume that extends westerly to connect to the south flowing 10-foot wide concrete cunette/flume.

24. The storm sewer system is designed for a 5-year recurrence interval storm.

25. The design includes overflow sidewalks at critical locations to convey runoff in excess of the capacity of the storm sewer.

26. The preliminary plat/site plan shows a loop of 8-inch water main. The water main connects to the existing water main stub along the west side of Josie Drive.

27. The water main includes a tapping sleeve and valve connection to the 8-inch water main located on the north side of Long Avenue.

28. It appears the valve for the tapping sleeve and valve connection Long Avenue may be located near the edge of the street approach. It would be desirable if the valve was located outside of the pavement. However, the location in the pavement is acceptable as long as it is not located at the curb line.

29. The site plan shows hydrant coverage circles. The hydrant coverage is satisfactory.

30. The internal loop of the water main includes two tee connections. Currently valves are shown on the two legs of the southwest tee and one leg of the east tee. It is recommended valves be provided on all three legs of the tee in order to provide enhanced isolation.

31. The water main is shown to be public.

32. The site grading plan generally shows the site to drain from the northeast to the southwest.

33. Based on the site grading plan there will be several locations where the water flow will be diagonally across the orientation of townhome units. During the individual site development it will be necessary to ensure the runoff is routed around the bi-attached townhome units.

34. The site plan includes minimum protection elevations (MPE) on Lots 1 through 20 and Lots 23 through 28 located along the perimeter of the project. No MPEs are shown on Lots 21 and 22 on the perimeter and Lots 29 through 36 located in the interior of the looped street.

The writer has completed a review of the Stormwater Management Plan submitted by Civil Engineering Consultants. Based on review the following is noted:

1. The stormwater detention for the project is provided as part of the Grand Estates stormwater detention basin. No additional stormwater detention is required.

2. The stormwater report indicates the storm sewers are sized for a minimum of a five year recurrent interval storm with sump intakes designed to intercept the runoff from a 100 year storm event.

3. The stormwater report indicates the storm sewers downstream from sump areas are sized to convey the runoff from a 100 year storm event.

4. A review of the storm sewer sizing calculations indicates the storm sewers are adequately sized based on the design criteria.

5. The stormwater drainage report includes sizing calculations and analysis for three "swales", including the 10-foot wide cunette located along the west side of the site and smaller swales referred to as the east swale and south swale.

If you have any questions or comments concerning the project, please contact the writer at 225-8000, or bveenstra@v-k.net.

VEENSTRA & KIMM, INC.

H. R. Veenstra Jr.

HRVJr:paj
19379
Cc: Paul Clauson, Civil Engineering Consultants

VEENSTRA & KIMM, INC.
3000 Westown Parkway • West Des Moines, Iowa 50266-1320
515-225-8000 • 515-225-7848 (FAX) • 800-241-8000 (WATS)

August 23, 2021

Kyle Michel
City Administrator
City of Van Meter
505 Grant Street
P.O. Box 160
Van Meter, Iowa 50261-0160

VAN METER, IOWA
GRAND RIDGE ESTATES TOWNHOMES PLAT 1
SECOND SUBMITTAL
REVIEW COMMENTS

The writer has completed a review of the second submittal of the preliminary plat/site plan for Grand Ridge Estates Townhomes Plat 1. The writer's letter of August 12, 2021 offered comments on the preliminary plat/site plan and the stormwater management plan.

Only a small number of the comments in the writer's letter of August 12, 2021 requested modifications or clarifications in the preliminary plat/site plan. Based on review of the second submittal of the preliminary plat/site plan and the response letter of August 20, 2021 from Civil Engineering Consultants the following comments are offered relative to the items in the writer's letter of August 13, 2021 where additional information or modifications were requested.

14. The revised submittal includes additional information indicating the sidewalk ramps appear to be designed in compliance with ADA.

19. All of the 6-inch sanitary sewers have been increased in size to 8-inch diameter. With the 8-inch diameter size the sanitary sewers would meet the minimum requirement of the City for a public sewer.

28. The valve on the tapping sleeve and valve connection on Long Avenue is clarified to be outside of the pavement. The location is satisfactory.

30. Valves have been added on all three legs of the water main of the two internal tees to provide enhanced reliability of the water system. The additional valve locations are satisfactory.

34. MPE elevations are now shown for all lots.

The writer would note one of the comments that does not require a change to the preliminary plat/site plan, but should be taken into consideration during the development of the property. Comment 33 notes the development of the townhome lots will need to take into consideration there are several lots where water will flow diagonally across the orientation of the townhome units. The exterior grading in the area of the townhomes will need to be consistent with the grading plan shown on the preliminary plat/site plan in order to provide the intended overland drainage.

If you have any questions or comments concerning the project, please contact the writer at 225-8000, or bveenstra@v-k.net.

VEENSTRA & KIMM, INC.

H. R. Veenstra Jr.

HRVJr:paj
193
Cc: Paul Clauson, Civil Engineering Consultants

CEC
Civil Engineering Consultants, Inc.

August 20, 2021

ATTN: Kyle Michel
City Administrator
310 Miller Street
P.O. Box 160
Van Meter, IA 50261

RE: **Grand Ridge Estates Townhomes Plat 1 – Preliminary Plat / Site Plan**

Dear Kyle:

On behalf of Van Meter Land Company, LLC, we are submitting the revised preliminary plat / site plan in the City of Van Meter, Dallas County, Iowa. The submittal includes:

- Revised preliminary plat / site plan
- This response letter addressing initial review from V&K

The staff comments dated August 13th have been addressed as follows:

1. The submittal involves both a preliminary plat and a site plan. The development plan is to create 36 individual townhome lots with Outlot Z encompassing the balance of the property exclusive of the 36 individual townhome lots. **OK**
2. The project involves 18 separate bi-attached townhome units. **OK**
3. The preliminary plat indicates the existing zoning is R-3 multifamily and the proposed zoning would be Grand Estates PUD. **OK**
4. General Note 1 on Sheet 02 indicates construction is to be in accordance with the 2021 Edition of SUDAS. This note is satisfactory. **OK**
5. The streets within the project are shown to be private. **OK**
6. The project involves two private street approaches. The east approach is to Josie Drive. The south driveway is to Long Avenue west of Josie Drive. The locations of the private street access points are satisfactory. **OK**
7. The width of the streets is 24-foot back to back. In some areas there is a rolled curb and in other areas a full height curb. The rolled curb is generally used in areas where the townhome driveways concept to the private street. **OK**
8. The site plan shows 24 additional parking stalls located in two parking areas along the east and west side of the central loop street. The location of the additional parking stalls in relationship to the townhome units appears to be satisfactory. **OK**
9. The site plan shows a 5-foot sidewalk on the west side of Josie Drive and a 5-foot sidewalk on the north side of Long Avenue. The configuration of these two sidewalks appears to be satisfactory. **OK**
10. The sidewalk at the north end of Josie Drive terminates and there is no proposed crossing of R-16 as there is no sidewalk on the north side of R-16. **OK**
11. The sidewalk at the intersection of Josie Drive and Long Avenue includes access ramps for the sidewalks located on the opposite side of the intersection. **OK**
12. For the sidewalk on Long Avenue terminates at the west boundary for future extension as the property to the west develops. **OK**

13. The site plan shows 5-foot sidewalk located along the interior streets. Except in the area of the parking stalls the 5-foot sidewalk is located immediately behind the curb line. **OK**
14. The interior sidewalk includes ADA ramps at several private street crossings. Civil Engineering Consultants will need to review the configuration of the sidewalk ramps to ensure compliance with ADA from a geometric and configurational perspective. **The sidewalk ramps have been detailed for compliance with ADA.**
15. Sanitary sewer is provided by a connection to the existing manhole on the north side of Long Avenue east of the new private street. The sewer continues west to the center of the private street and then along the private streets. The high point on the sewer is located at the northeast corner with the sewers extending from that point along the east and south legs and along the north and west legs to a manhole at the southwest corner of the interior loop street. **OK**
16. The sanitary sewer to the southwest corner of the loop street is shown as 8-inch diameter at a slope of 0.60%. This sanitary sewer is satisfactory. **OK**
17. The sanitary sewers around the loop street are shown as 6-inch at a slope of 1.5% to 1.57%. **OK**
18. The preliminary plat indicates the intent for the sanitary sewer to be public. **OK**
19. Historically the City has required public sewers to be 8-inch diameter. The City will need to decide if it will accept public 6-inch diameter sewers, if it will require the 6-inch sewer to be private or increased in size to 8-inch diameter to be a public sewer. **The sanitary sewers have been revised to be 8-inch diameter.**
20. The storm sewer starts with an outlet on the west side of the private street connecting to Long Avenue. The storm sewer continues northerly along the west leg of the private street, with legs extending north and east and north along the southerly and easterly legs of the private street. **OK**
21. The preliminary plat shows the storm sewer to be public. **OK**
22. The preliminary plat/site plan shows a 10-foot wide paved cunette extending along the west boundary of the site. The concrete cunette flume will carry the runoff from the R-16 culvert to the storm sewer under Long Avenue near the southwest corner of the site. **OK**
23. The discharge from the storm sewer in the project is to a 6-foot wide concrete cunette/flume that extends westerly to connect to the south flowing 10-foot wide concrete cunette/flume. **OK**
24. The storm sewer system is designed for a 5-year recurrence interval storm. **OK**
25. The design includes overflow sidewalks at critical locations to convey runoff in excess of the capacity of the storm sewer. **OK**
26. The preliminary plat/site plan shows a loop of 8-inch water main. The water main connects to the existing water main stub along the west side of Josie Drive. **OK**
27. The water main includes a tapping sleeve and valve connection to the 8-inch water main located on the north side of Long Avenue. **OK**
28. It appears the valve for the tapping sleeve and valve connection Long Avenue may be located near the edge of the street approach. It would be desirable if the valve was located outside of the pavement. However, the location in the pavement is acceptable as long as it is not located at the curb line. **The proposed valve has been shown outside of the pavement.**
29. The site plan shows hydrant coverage circles. The hydrant coverage is satisfactory. **OK**
30. The internal loop of the water main includes two tee connections. Currently valves are shown on the two legs of the southwest tee and one leg of the east tee. It is recommended valves be provided on all three legs of the tee in order to provide enhanced isolation. **Additional valves have been added at the tee connections.**
31. The water main is shown to be public. **OK**
32. The site grading plan generally shows the site to drain from the northeast to the southwest. **OK**

CEC
Civil Engineering Consultants, Inc.

33. Based on the site grading plan there will be several locations where the water flow will be diagonally across the orientation of townhome units. During the individual site development it will be necessary to ensure the runoff is routed around the bi-attached townhome units. **OK**
34. The site plan includes minimum protection elevations (MPE) on Lots 1 through 20 and Lots 23 through 28 located along the perimeter of the project. No MPEs are shown on Lots 21 and 22 on the perimeter and Lots 29 through 36 located in the interior of the looped street. **The grading plan and M.P.E.s have been revised.**

The writer has completed a review of the Stormwater Management Plan submitted by Civil Engineering Consultants. Based on review the following is noted:

1. The stormwater detention for the project is provided as part of the Grand Estates stormwater detention basin. No additional stormwater detention is required. **OK**
2. The stormwater report indicates the storm sewers are sized for a minimum of a five year recurrent interval storm with sump intakes designed to intercept the runoff from a 100 year storm event. **OK**
3. The stormwater report indicates the storm sewers downstream from sump areas are sized to convey the runoff from a 100 year storm event. **OK**
4. A review of the storm sewer sizing calculations indicates the storm sewers are adequately sized based on the design criteria. **OK**
5. The stormwater drainage report includes sizing calculations and analysis for three “swales”, including the 10-foot wide cunette located along the west side of the site and smaller swales referred to as the east swale and south swale. **OK**

Please review this information at your earliest convenience. If you have any additional comments or questions do not hesitate to contact us.

Sincerely,
Civil Engineering Consultants, Inc.

Paul Clausen, P.E.
Cc: Dustin Jones and Jeff Tucker

OFFICIAL'S STAMP

PUBLIC IMPROVEMENTS
GRAND RIDGE ESTATES TOWNHOMES
2915 LONG AVENUE, VAN METER, IOWA

VICINITY MAP
1" = 1000'

NORTH

UTILITIES
VAN METER PUBLIC WORKS
ADDRESS: 310 MILL STREET,
VAN METER, IOWA 50261
PHONE: (515) 996-2644

SANITARY SEWER - CITY OF VAN METER
STORM SEWER - CITY OF VAN METER
WATER - CITY OF VAN METER

ELECTRIC AND NATURAL GAS UTILITY
MIDAMERICAN ENERGY CORPORATION
666 GRAND AVENUE
DES MOINES, IA 50309
CONTACT: MATT REINHARDT
PHONE: 515-515-252-6413
EMAIL: MJREINHARDT@MIDAMERICAN.COM

TELEPHONE
CENTURY LINK
4201 KINGMAN BLVD. 2nd FLOOR
DES MOINES, IA 50311
CONTACT: CINDY CARTER
PHONE: 515-554-3316

BUILDING DEPARTMENT
CITY OF VAN METER
ADDRESS: 310 MILL STREET,
VAN METER, IOWA 50261
PHONE: (515) 996-2644

HEALTH DEPARTMENT
DALLAS COUNTY
PUBLIC HEALTH DEPARTMENT
ADDRESS: 25747 N AVENUE,
ADEL, IA 50003
PHONE: (515) 993-3750

FIRE DEPARTMENT
505 GRANT ST,
VAN METER, IA 50261
DIRECTOR DAGGETT: 515-202-4154
STATION PHONE NUMBER -515-993-4567

FRANCHISE UTILITIES
1. CONTRACT FOR STREET LIGHTING SHALL BE EXECUTED WITH FINAL PLAT.
2. CONTRACT FOR ELECTRIC DISTRIBUTION SYSTEM SHALL BE EXECUTED WITH FINAL PLAT.
3. NATURAL GAS, TELEPHONE, CABLE OR OTHER UTILITIES SHALL BE INSTALLED AFTER COMPLETION OF PLAT IMPROVEMENTS.

QUANTITIES

SANITARY SEWER

1,000 L.F.	8-INCH SANITARY SEWER
5 EA.	SW-301 MANHOLE
36 EA.	SERVICES

STORM SEWER

223 L.F.	8-INCH PVC
668 L.F.	15-INCH RCP CLASS III
67 L.F.	18-INCH RCP CLASS III
4 EA.	SW-401 MANHOLE
1 EA.	SW-501 INTAKE W/ SW-603 'R' GRATE
6 EA.	SW-503 INTAKE W/ SW-602 'E' CASTING & SW-603 'R' GRATE
1 EA.	SW-512 INTAKE W/ SW-604 TYPE '3' GRATE
36 EA.	SERVICES

WATER MAIN

1,113 L.F.	8-INCH WATER MAIN
4 EA.	8-INCH VALVE
1 EA.	8"x8"x8" TAPPING TEE
2 EA.	8"X8"X8" TEE
4 EA.	HYDRANT, TEE & 6-INCH VALVE
36 EA.	SERVICES

PAVING

3,430 S.Y.	7-INCH NON-REINFORCED P.C.C..
3,933 S.Y.	12" SUBGRADE PREP.
345 S.Y.	5-INCH NON REINFORCED CONCRETE FLUME (517 L.F.)

GENERAL LEGEND

PROPOSED
- PLAT BOUNDARY
- SECTION LINE
- LOT LINE
- CENTERLINE
- EASEMENT LINE
- FLARED END SECTION
- DRAIN BASIN OR SEDIMENT RISER
- DRAIN BASIN WITH SOLID GRATE
- WATER VALVE
- FIRE HYDRANT ASSEMBLY
- BLOW-OFF HYDRANT
- SCOUR STOP MAT
- TURF REINFORCEMENT MAT
- STORM SEWER WITH SIZE
- SUBDRAIN
- WATER SEWER WITH SIZE
- WATER SERVICE
- PROPOSED CONTOUR
- SILT FENCE
- ADDRESS
- RIPRAP

EXISTING
- LOT LINE
- SANITARY/STORM MANHOLE
- WATER VALVE
- FIRE HYDRANT
- STORM SEWER SINGLE INTAKE
- STORM SEWER DOUBLE INTAKE
- STORM SEWER ROUND INTAKE
- FLARED END SECTION
- DECIDUOUS TREE
- CONIFEROUS TREE
- SHRUB
- POWER POLE
- STREET LIGHT
- GUY ANCHOR
- ELECTRIC TRANSFORMER
- GAS METER
- TELEPHONE RISER
- SIGN
- CATV — UNDERGROUND TELEVISION
- USE — UNDERGROUND ELECTRIC
- -G- UNDERGROUND GAS
- USFO — UNDERGROUND FIBER OPTIC
- UST — UNDERGROUND TELEPHONE
- OHW — OVERHEAD ELECTRIC
- SAN — SANITARY SEWER WITH SIZE
- STM — STORM SEWER WITH SIZE
- W — WATER MAIN WITH SIZE
- 926 — EXISTING CONTOUR
- TREELINE
- B.S.L. BUILDING SETBACK LINE
- P.U.E. PUBLIC UTILITY EASEMENT
- M.O.E. MINIMUM OPENING ELEVATION

Sheet List Table	
Sheet Number	Sheet Title
01	COVER SHEET
02	NOTES & INFORMATION
03	DETAIL SHEET
04	SANITARY SEWER PLAN & PROFILE
05	SANITARY SEWER PLAN & PROFILE
06	STORM SEWER PLAN & PROFILE
07	STORM SEWER PLAN & PROFILE
08	WATER MAIN PLAN & PROFILE
09	WATER MAIN PLAN & PROFILE
10	PAVING DETAIL
11	GRADING PLAN

SUBMITTAL TABLE	
SUBMITTAL DATE	SUBMITTAL NOTES
AUGUST 30, 2021	INITIAL SUBMITTAL
SEPTEMBER 8, 2021	

PROPERTY OWNER / DEVELOPER / APPLICANT:
VAN METER LAND COMPANY, LLC
9400 PLUM DRIVE, SUITE 100
URBANDALE, IOWA 50322
CONTACT: DUSTIN JONES
PH. 515-225-6677
EMAIL: DJONES@ACGIOWA.COM

PROJECT MANAGER:
PAUL CLAUSEN, PE.
CIVIL ENGINEERING CONSULTANTS
2400 86TH STREET, #12
DES MOINES, IOWA 50322
PH. 515-276-4884 EXT. #217
EMAIL: CLAUSEN@CECLAC.COM

PROFESSIONAL LAND SURVEYOR:
CIVIL ENGINEERING CONSULTANTS, INC.
PH: JEFFERY A. GADDIS, PLS
2400 86TH STREET, SUITE 12
URBANDALE, IA 50322
PH. 515-276-4884 EXT. 221
EMAIL: GADDIS@CECLAC.COM

MUNICIPALITY PLANNER:
KYLE MICHEL
CITY ADMINISTRATOR
CITY OF VAN METER, IOWA
PHONE: (515) 996-2644
EMAIL: KMICHEL@VANMETERIA.GOV

LEGAL DESCRIPTION
LOT 83, GRAND RIDGE ESTATES PLAT 1, AN OFFICIAL PLAT RECORDED IN BOOK XXXX, PAGE XXX AT THE DALLAS COUNTY RECORDER'S OFFICE AND CONTAINING 4.87 ACRES MORE OR LESS.

TOTAL LAND AREA:
212,060 SQ. FT
4.87 AC.

EXISTING ZONING:
GRAND ESTATES P.U.D.
R-3 - MULTIPLE FAMILY

FLOOD ZONE
ZONE 'X' ACCORDING TO FEMA FLOOD INSURANCE RATE MAPS.
COMMUNITY-PANEL #19181C0107G
MAP REVISED NOVEMBER 16, 2018.

NOTES
1. IMPROVEMENTS SHALL BE CONSTRUCTED USING 2021 S.U.D.A.S. SPECIFICATIONS

CONSTRUCTION SCHEDULE

GRADING ACTIVITIES	- OCTOBER, 2021
UTILITY PLACEMENT	- NOVEMBER, 2021
PAVING	- MAY, 2022
PUNCH LIST ITEMS	- JUNE, 2022

CERTIFICATIONS

*** THIS LAND SURVEYOR'S CERTIFICATION DOES NOT INCLUDE DESIGN SPOT ELEVATIONS, MINIMUM PROTECTION ELEVATIONS, MINIMUM OPENING ELEVATIONS, MINIMUM BASEMENT ELEVATIONS, DETENTION BASIN & STORM WATER EVENT ELEVATIONS, OR ANY OTHER ITEMS THAT MAY FALL UNDER THE PRACTICE OF A PROFESSIONAL CIVIL ENGINEER. ***

PRELIMINARY

I HEREBY CERTIFY THAT THIS LAND SURVEYING DOCUMENT WAS PREPARED AND THE RELATED SURVEY WORK WAS PERFORMED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF IOWA.

September 8, 2021

JEFFREY A. GADDIS, IOWA LICENSE NO. 18381 DATE
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2022

PRELIMINARY

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.

PAUL J.D. CLAUSEN, IOWA LICENSED NO. 28712 DATE
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2021

PAGES OR SHEETS COVERED BY THIS SEAL:

ALL SHEETS

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com

CEC
Civil Engineering Consultants, Inc.
2400 86th Street . Unit 12 . Des Moines, Iowa 50322
515.276.4884 . Fax: 515.276.7084 . mail@ceclac.com

PUBLISH DATE: September 8, 2021
DATE OF SURVEY: JUNE 16, 2020 PC
DESIGNED BY:
DRAWN BY: A.JR

PRELIMINARY
GRAND RIDGE ESTATES TOWNHOMES
2915 LONG AVENUE, VAN METER, IOWA
COVER SHEET

SHEET 01 OF 11

E-8663

PLOT BY: AUSTIN ROSEMER - 2021/09/08 - G:\E-FILES\E-8600\E8663_CSD Drawings\Construction Documents\Site Plan\E8663 SP COVER.dwg - ANSI EXPAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 - CEC-ANSI TEST.CTB - PLOT SCALE = 1:1

GENERAL NOTES

1. ALL CONSTRUCTION (PUBLIC & PRIVATE) SHALL BE IN ACCORDANCE WITH 2021 EDITION OF S.U.D.A.S. STANDARD SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR TESTING AND INSPECTION AND NOTIFY FOLLOWING AT LEAST ONE WEEK PRIOR TO BEGINNING CONSTRUCTION:
   a. CITY OF VAN METER (515-996-2644).
   b. VAN METER LAND COMPANY, LLC (515-225-6677)
   c. CIVIL ENGINEERING CONSULTANTS, INC. (515-278-4884)
   d. IOWA ONE-CALL
2. PARKLAND DEDICATION WAS SATISFIED WITH GRAND RIDGE ESTATES PLAT 1.
3. CONTRACTOR SHALL VERIFY LOCATION AND PROTECT ALL UTILITIES AND STRUCTURES. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY CONTRACTOR AT CONTRACTOR'S EXPENSE TO SATISFACTION OF OWNER.
4. CIVIL ENGINEERING CONSULTANTS INC. IS NOT A GEOTECHNICAL ENGINEER, GEOTECHNICAL REPORT IS AVAILABLE BY CONTACTING ENGINEER. CONTRACTORS AND BIDDERS SHALL REFER TO AND FOLLOW RECOMMENDATIONS OF GEOTECHNICAL REPORT PREPARED BY ALLENDER BUTZKE (PN161238).
5. SOME LOTS ACCEPT DRAINAGE FROM ADJACENT PROPERTY. BUILDING ON THESE LOTS MUST TAKE INTO ACCOUNT UPSTREAM DRAINAGE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT LOCATIONS OF UTILITY SERVICES.
7. ALL UTILITIES INDICATED ON PLAT ARE PUBLIC UNLESS OTHERWISE NOTED.
8. LOCATION OF EXISTING FACILITIES AND APPURTENANCES SHOWN ON PLAN ARE BASED ON AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING TO DETERMINE EXACT FACILITIES LOCATIONS. CIVIL ENGINEERING CONSULTANTS, INC. DOES NOT GUARANTEE LOCATION OF EXISTING FACILITIES AS SHOWN, OR THAT ALL EXISTING FACILITIES ARE SHOWN. IT IS CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL PUBLIC AND PRIVATE UTILITY PROVIDERS SERVING AREA, AND IOWA ONE CALL, TO DETERMINE EXTENT AND PRECISE LOCATION OF EXISTING FACILITIES BEFORE CONSTRUCTION BEGINS.
9. CONTRACTOR SHALL PROTECT EXISTING ON-SITE FACILITIES FROM DAMAGE RESULTING FROM CONTRACTOR'S WORK. IF DAMAGE, BREAKAGE, INTERRUPTION OF SERVICE, ETC. OF EXISTING FACILITIES DOES OCCUR CONTRACTOR SHALL IMMEDIATELY CONTACT UTILITY'S OWNER.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY FARM TILE DAMAGE DURING CONSTRUCTION AND RECORDING LOCATION OF TILE. CONTRACTOR SHALL RECONNECT ALL FIELD TILE INTERCEPTED DURING CONSTRUCTION.
11. ANY CHANGES TO CONSTRUCTION DRAWINGS DURING CONSTRUCTION SHALL BE APPROVED IN WRITING BY CITY OF VAN METER PUBLIC WORKS DEPARTMENT.
12. CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES MADE DURING CONSTRUCTION THAT HAVE NOT BEEN APPROVED IN WRITING BY CITY OF VAN METER PUBLIC WORKS DEPARTMENT.
13. CONTRACTOR SHALL NOTIFY CITY OF VAN METER PUBLIC WORKS DEPARTMENT 48-HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ON HOLIDAY OR WEEKEND.
14. ALL CONSTRUCTION STAKING SHALL BE PERFORMED BY LICENSED ENGINEER OR LAND SURVEYOR.
15. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON PLANS SHALL RELIEVE CONTRACTOR FROM COMPLYING WITH ALL APPLICABLE SAFETY REGULATIONS.
16. CONTRACTOR SHALL CONDUCT CLEAN-UP, SURFACE RESTORATION, AND SURFACE REPLACEMENT ACTIVITIES AS CONSTRUCTION PROGRESSES. ALL DEBRIS SPILLED ON R.O.W. OR ON ADJACENT PROPERTY SHALL BE PICKED UP BY CONTRACTOR AT END OF EACH DAY.
17. IF DISCREPANCY EXISTS BETWEEN DETAILED PLANS AND QUANTITIES, PLANS SHALL GOVERN.
18. LOCATIONS OF ALL UTILITY SERVICES SHALL BE CLEARLY MARKED AND LOCATION INFORMATION SHALL BE GIVEN TO CITY OF VAN METER.
19. ALL STATIONING IS BASED ON STREET CENTERLINE MEASUREMENT AND SPECIFICATIONS.

SANITARY NOTES

1. CASTING TYPES ARE FROM S.U.D.A.S. SPECS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT LOCATIONS OF ALL SANITARY SEWER SERVICES & PROVIDING THIS INFORMATION TO ENGINEER AND CITY OF VAN METER.
3. CONTRACTOR SHALL CLEAN AND VIDEO TAPE SANITARY SEWER AT PROJECT COMPLETION. COPY OF VIDEO SHALL BE PROVIDED TO CITY OF VAN METER PUBLIC WORKS DEPARTMENT.
4. ALL MANHOLES TO HAVE I&I BARRIERS.
5. ALL MANHOLES AND MANHOLE CASTINGS MUST BE ROTATED AS REQUIRED TO AVOID MANHOLE CONFLICTS WITH SIDEWALKS.

STORM NOTES

1. PROVIDE APRON GUARDS & CONCRETE FOOTINGS ON ALL FLARED END SECTIONS. CONTRACTOR SHALL TIE LAST THREE PIPE JOINTS AT FLARED END SECTION.
2. ALL STORM SEWER ARE TO BE CLEANED AND VIDEO TAPED UPON COMPLETION. COPY OF VIDEO SHALL BE PROVIDED TO CITY OF VAN METER PUBLIC WORKS DEPARTMENT.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT LOCATIONS OF ALL STORM SEWER SERVICES & PROVIDING THIS INFORMATION TO ENGINEER.
4. SUMP SERVICE LINES WILL BE CONNECTED TO STORM SEWER, NOT SUB-DRAIN LINES.
5. ALL PRIVATE INFRASTRUCTURE SHALL BE OWNED AND MAINTAINED BY OWNER.
6. STORM SEWER SHALL BE OPEN JOINTED.

WATER NOTES

1. PIPE MATERIALS: AWWA C900 DR - 18 PVC INSTALL NO. 10 THHN STANDARD COPPER TRACER WIRE TO SURFACE AT FIRE HYDRANTS.
2. CONTRACTOR SHALL PROTECT AND BACKFILL AROUND ALL UTILITIES AND STRUCTURES. BACKFILL SHALL BE IN 6-INCH LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY, AT 0% TO +4% OPTIMUM MOISTURE CONTENT.
3. HYDRANTS, MANHOLE COVERS AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED GRADE ELEVATIONS.
4. SERVICES TO BE 1-INCH NON-METALLIC AND SHALL BE BORED WHEN FEASIBLE, STOP BOXES TO BE FORD BALL VALVE TYPE CURB STOPS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT LOCATION OF ALL WATER SERVICES AND PROVIDING THIS INFORMATION TO ENGINEER AND CITY OF VAN METER.
6. HYDRANTS SHALL BE SET NOT MORE THAN 4 FEET FROM CENTER OF WATER MAIN.
7. AN APPROVED SADDLE SHALL BE USED FOR ALL WATER SERVICE TAPS.
8. VALVES SHALL BE CLOW RW GATE.
9. CURB STOPS SHALL BE LOCATED NO FARTHER THAN 10" INSIDE R.O.W. FROM PROPERTY LINE. UNDER NO CIRCUMSTANCES SHALL THEY BE LOCATED IN SIDEWALK.
10. ALL SERVICE LINES SHALL BE TESTED WITH WATER MAIN.
11. WHERE SEWERS CROSS OVER OR LESS THAN 18-INCHES BELOW WATER MAIN:
    a. STORM SEWERS: FLEXIBLE O-RING-GASKET JOINTS RATED AT 13 PSI OR GREATER SHALL BE UTILIZED UNTIL NORMAL DISTANCE FROM SEWER TO WATER MAIN IS 10' MIN.
    b. ONE FULL LENGTH OF WATER MAIN SHALL BE LOCATED SO THAT BOTH JOINTS AREA AS FAR AS POSSIBLE FROM SEWER.
    c. SEWER MUST BE ADEQUATELY SUPPORTED.
    d. LOW PERMEABLE SOIL SHALL BE USED FRO BACKFILL WITHIN 10' OF POINT OF CROSSING.
    e. SANITARY SEWERS SHALL BE CONSTRUCTED OF WATER MAIN MATERIAL FOR 20' CENTERED ON WATER MAIN.
12. ALL STORM SEWER CROSSING ABOVE WATER MAIN WILL NEED TO INSTALL O-RING JOINT PIPE FOR 20' CENTERED OVER WATER MAIN.
13. SPECIAL CARE MUST BE USED TO AVOID AIR ENTRAPMENT AT AREA WHERE WATER MAIN DIPS.

PAVING NOTES

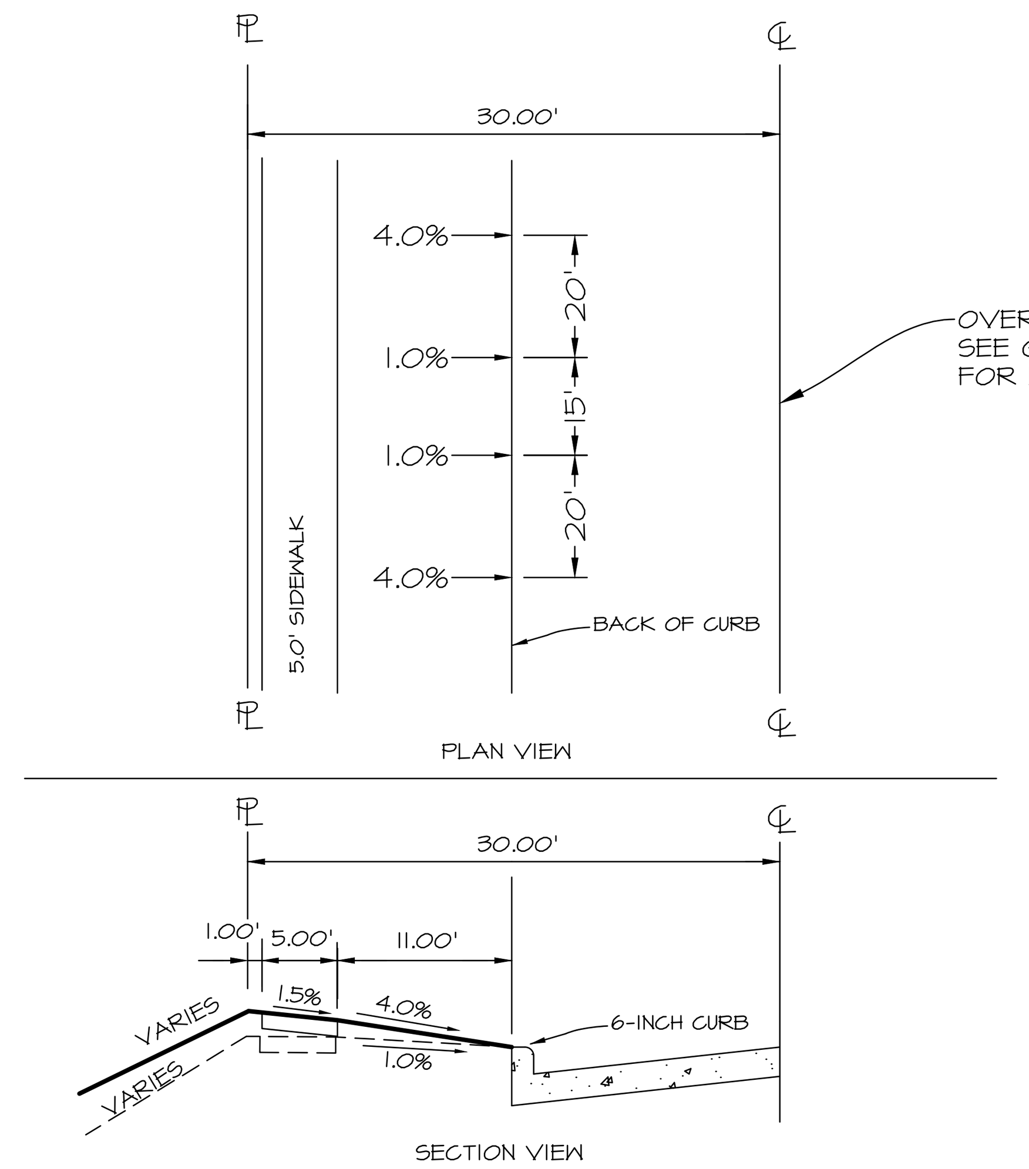
1. ALL ELEVATIONS ARE PROPOSED FINISHED GRADE AT CENTERLINE UNLESS OTHERWISE NOTED.
2. ALL STREETS SHALL HAVE 6-INCH CURBS UNLESS NOTED OTHERWISE.
3. PROVIDE CURB DROPS FOR SIDEWALKS AT INTERSECTIONS.
4. CONTRACTOR SHALL FOLLOW PAVEMENT RECOMMENDATIONS OF GEOTECHNICAL REPORT PREPARED BY ALLENDER BUTZKE (PN161238).
5. CITY OF VAN METER SHALL BE NOTIFIED OF ALL SUBGRADE TREATMENTS PRIOR TO USE.
6. SPECIAL CARE IS REQUIRED IN AREAS OF FILL TO MINIMIZE THE AMOUNT OF SETTLEMENT AND POTENTIAL FOR CRACKING.

NPDES/SWPPP

1. OWNER AND/OR CONTRACTOR ARE REQUIRED TO OBTAIN NPDES PERMIT AND FOLLOW REQUIREMENTS OF ASSOCIATED STORM WATER POLLUTION PREVENTION PLAN PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.

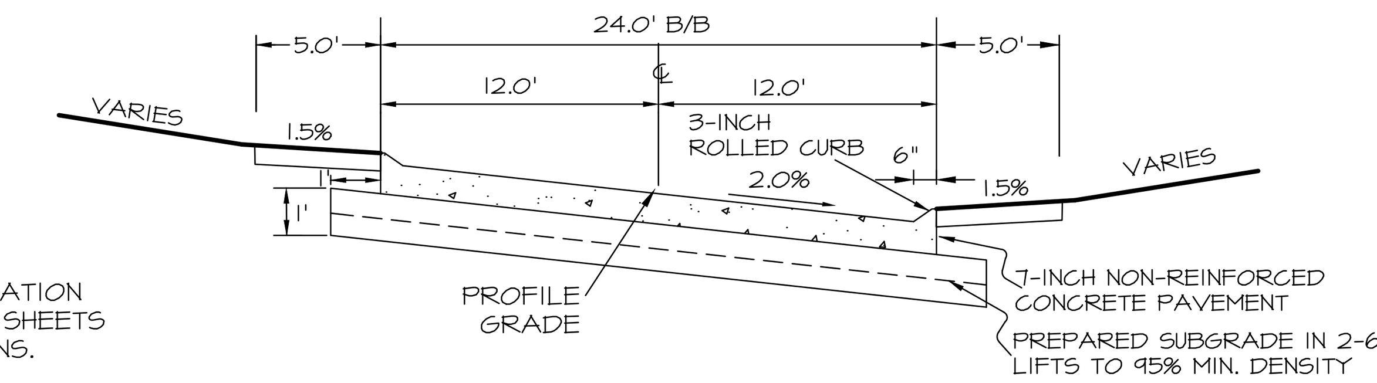
GRADING NOTES

1. STRIP TOPSOIL FROM ALL AREAS WHICH ARE TO RECEIVE STRUCTURAL FILL.
2. ALL AREAS TO RECEIVE FILL TO BE BENCHED.
3. PREPARE BOTTOM OF BENCH FOR FILL BY DISCING TO DEPTH OF 6-INCHES.
4. ALL SITE GRADING FILL SHALL BE COMPACTED TO DENSITY NOT LESS THAN 95% STANDARD PROCTOR. MOISTURE CONTENT OF FILL MATERIAL SHALL MATCH URBAN STANDARD.
5. MAINTAIN ALL CUT AND FILL AREAS FOR SURFACE DRAINAGE AT ALL TIMES.
6. FINAL GRADES WITHIN PAVED AREAS SHALL BE WITHIN 0.1' OF PLAN GRADE, ALL OTHER AREAS TO BE WITHIN 0.2' OF PLAN GRADE.
7. STRIP BLACK DIRT AND RE-SPREAD. (8" MINIMUM)
8. ADDITIONAL SILT FENCING MAY BE REQUIRED AFTER CITY FIELD INSPECTION.
9. SPECIAL CARE MUST BE TAKEN IN AREAS OF FILL TO REDUCE THE RISK OF SETTLEMENT AND SAGGING.
10. AREAS TO BE SURCHARGED SHALL BE STRIPPED PRIOR TO SURCHARGING.



TYPICAL OVERFLOW ROUTE FOR PUBLIC STREET

NO SCALE



TYPICAL 24' B/B ROLLED CURB CROSS SECTION

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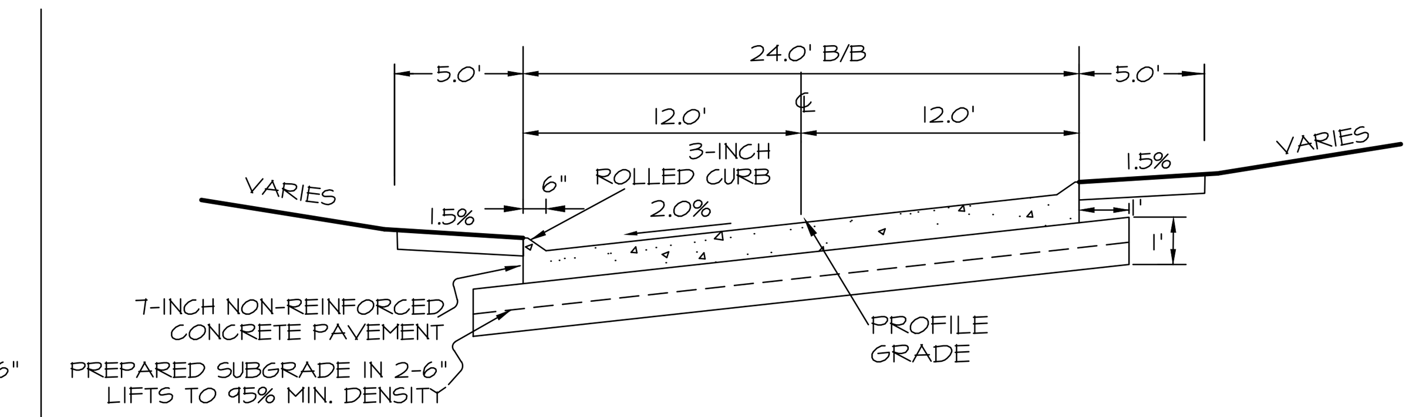

TYPICAL 24' B/B ROLLED CURB CROSS SECTION

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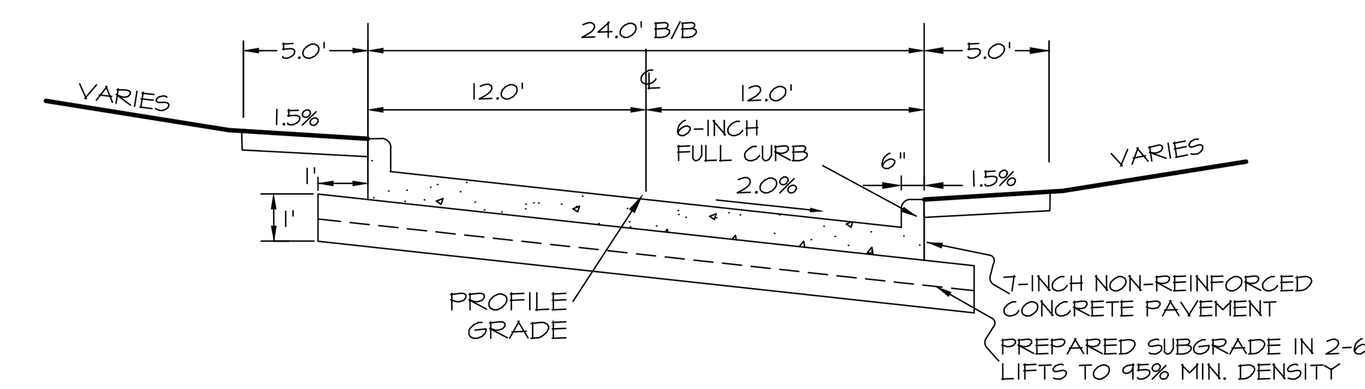
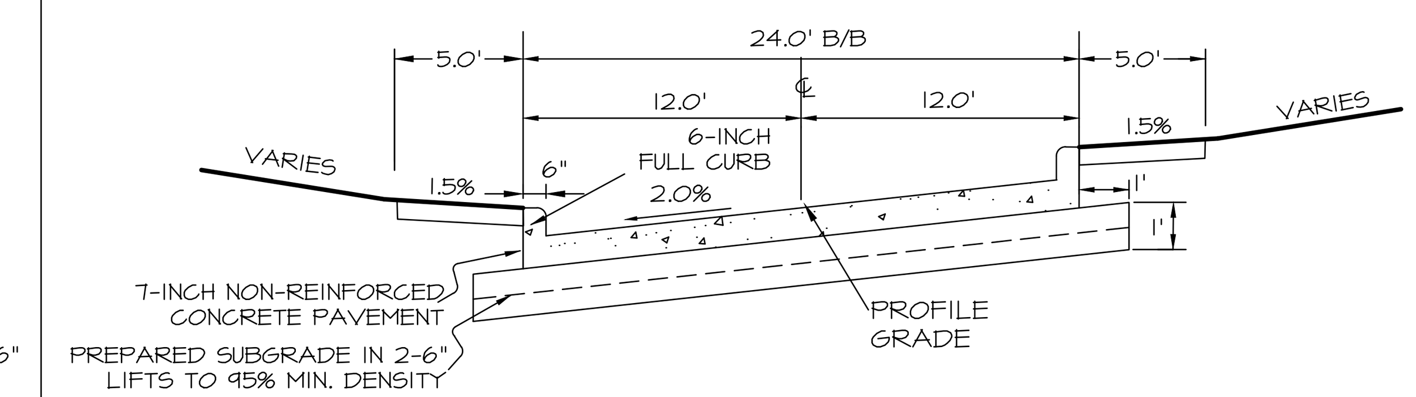


TYPICAL 24' B/B FULL CURB CROSS SECTION

NO SCALE

SLOPED TO THE RIGHT



TYPICAL 24' B/B FULL CURB CROSS SECTION

NO SCALE

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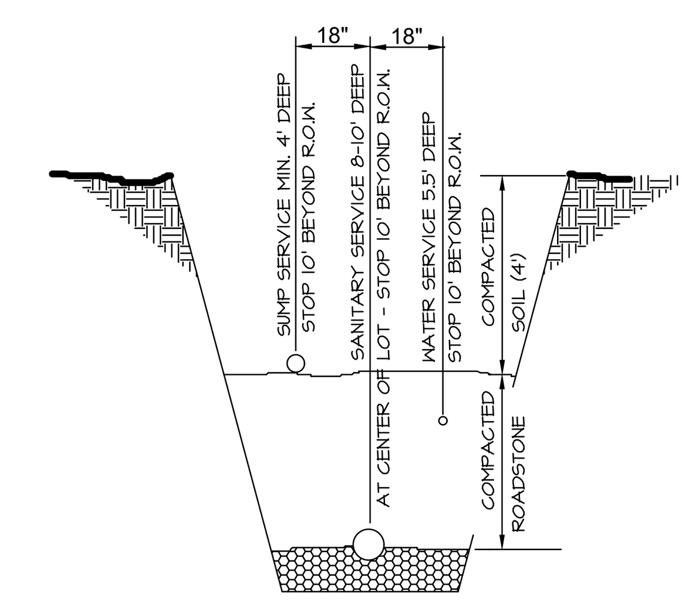
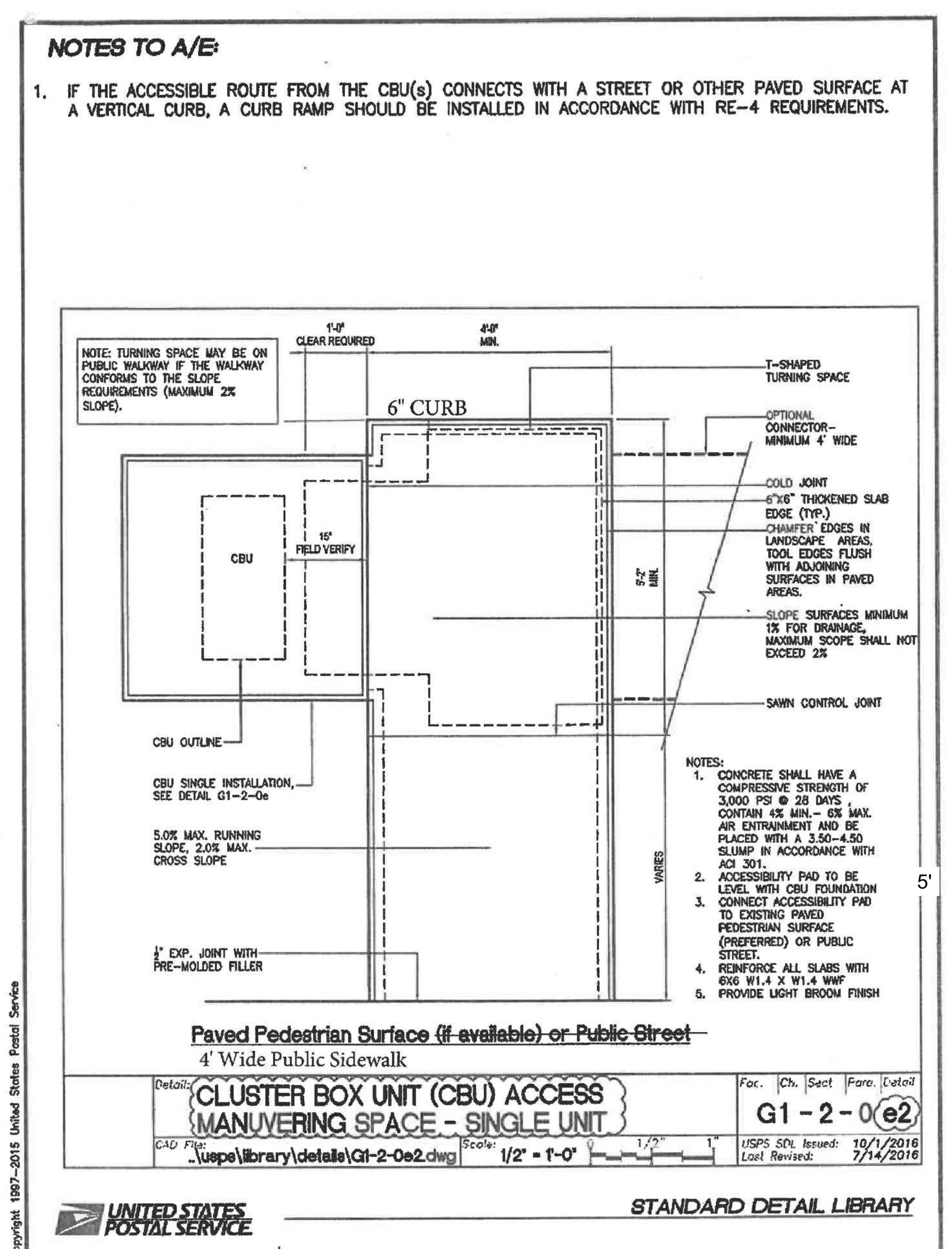
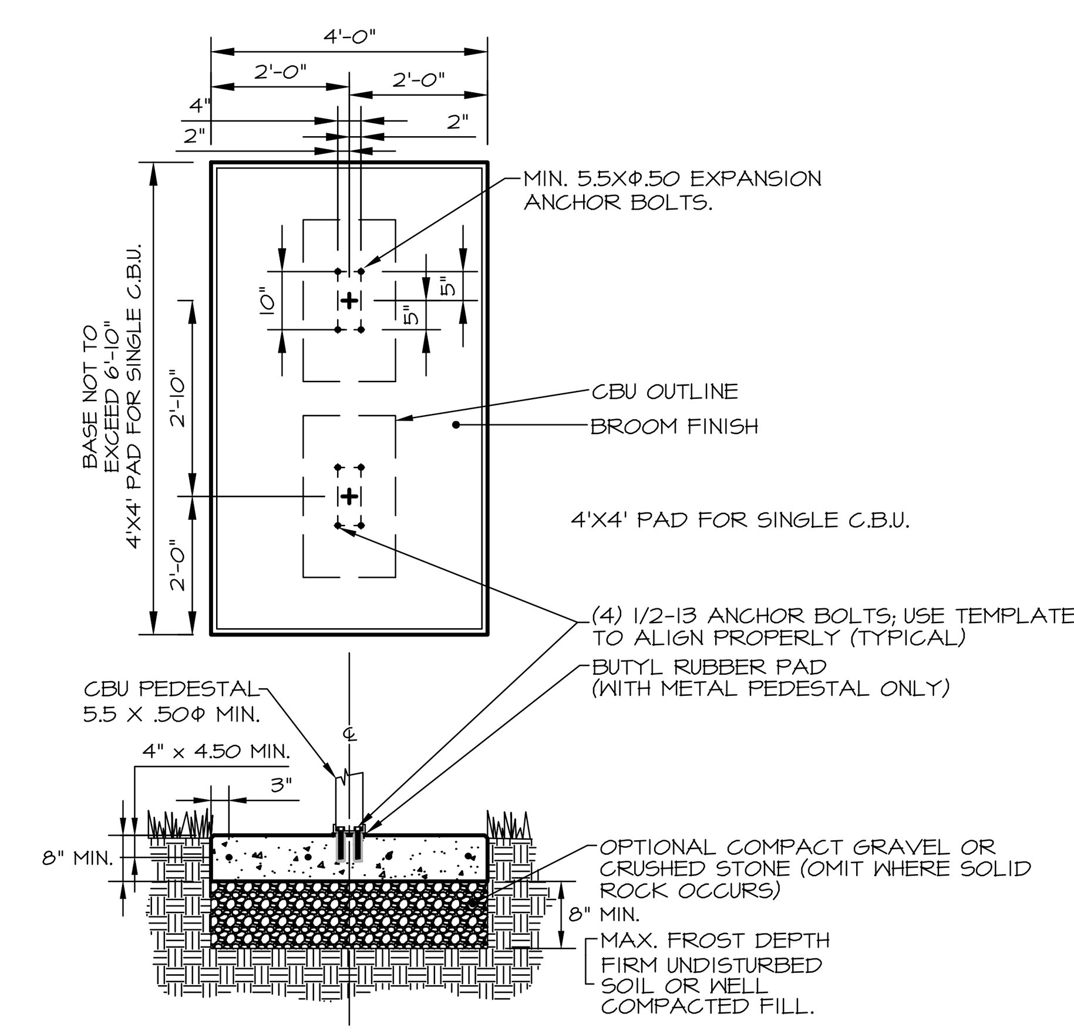


SANITARY & SUMP SERVICES SHALL BE MARKED AT THE END OF PIPE WITH A 2X4 TO THE SURFACE & A STEEL FENCE POST. PLACE ONE 6 FT. STEEL POST BURIED 3 FT. AT WATER CURB BOX. COLOR MARKING OF SERVICES SHALL BE RED FOR SANITARY, GREEN FOR SUMPS AND BLUE FOR WATER.

SERVICE LOCATION DETAIL

NO SCALE





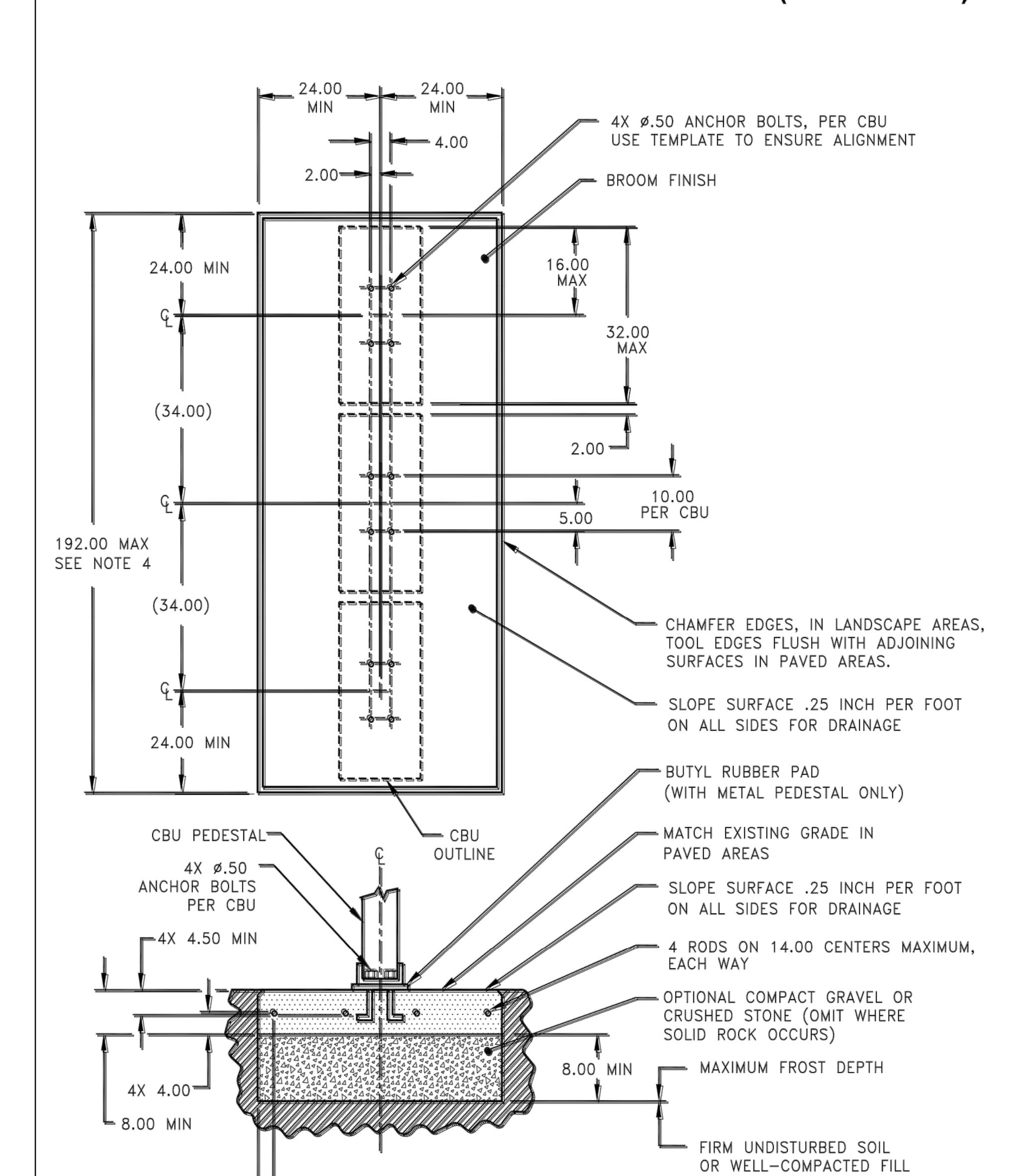
NOTES:

1) EXPANSION BOLTS SHALL BE EQUIVALENT TO THE FOLLOWING PROVIDERS:
   a. HILTI KWIK BOLT (www.us.hilti.com) 11-1/2" DIAMETER x 5-1/2" OVERALL LENGTH GALVANIZED, CATALOG #: 000-4353-696 KB II 12-512, STAINLESS STEEL; CATALOG #: 000-454-744 ENDURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 3-1/2"
   a. ITW RAMSET REDHEAD TRUBOLT (www.ramset-redhead.com) GALVANIZED, 1/2" DIAMETER x 7" OVERALL LENGTH; CATALOG NUMBER: WS-1270G ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 4-1/8".
   b. RAWL STUD (www.rawl.com) GALVANIZED, 1/2" DIAMETER x 5-1/2" OVERALL LENGTH; CATALOG NUMBER: 7724 ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 4".
3) TOP OF PAD SHALL MATCH FUTURE SIDEWALK ELEVATION W/ MAXIMUM CROSS SLOPE OF 2% TOWARDS STREET.
4) ALL C.B.U. SHALL FACE EITHER SOUTH OR EAST TO MINIMIZE FREEZING.

CONCRETE MAILBOX PAD - MULTI-UNIT DETAIL

NOT TO SCALE

USPS APPROVED SPECIFICATIONS – CONCRETE PAD (MULTIPLE UNIT)



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 – 4.50 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 B8M, TYPE 316 STAINLESS STEEL.
4. A 3 CBU CONFIGURATION IS DEPICTED. A 2 OR 4 CBU CONFIGURATION MAY BE USED AS LONG AS THEY ARE ARRANGED IN GROUPS SUCH THAT THE OVERALL DIMENSION OF THE CONCRETE BASE DOES NOT EXCEED 192 INCHES.

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PUBLISH DATE: September 8, 2021

DATE OF SURVEY:	JUNE 16, 2020
DESIGNED BY:	PC
DRAWN BY:	AJR

PRELIMINARY

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

NOTES & INFORMATION

SHEET 02 OF 11

E-8663

PRELIMINARY

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DRAWN BY: MEH

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

DETAIL SHEET

SHEET 03 OF 11

E-8663

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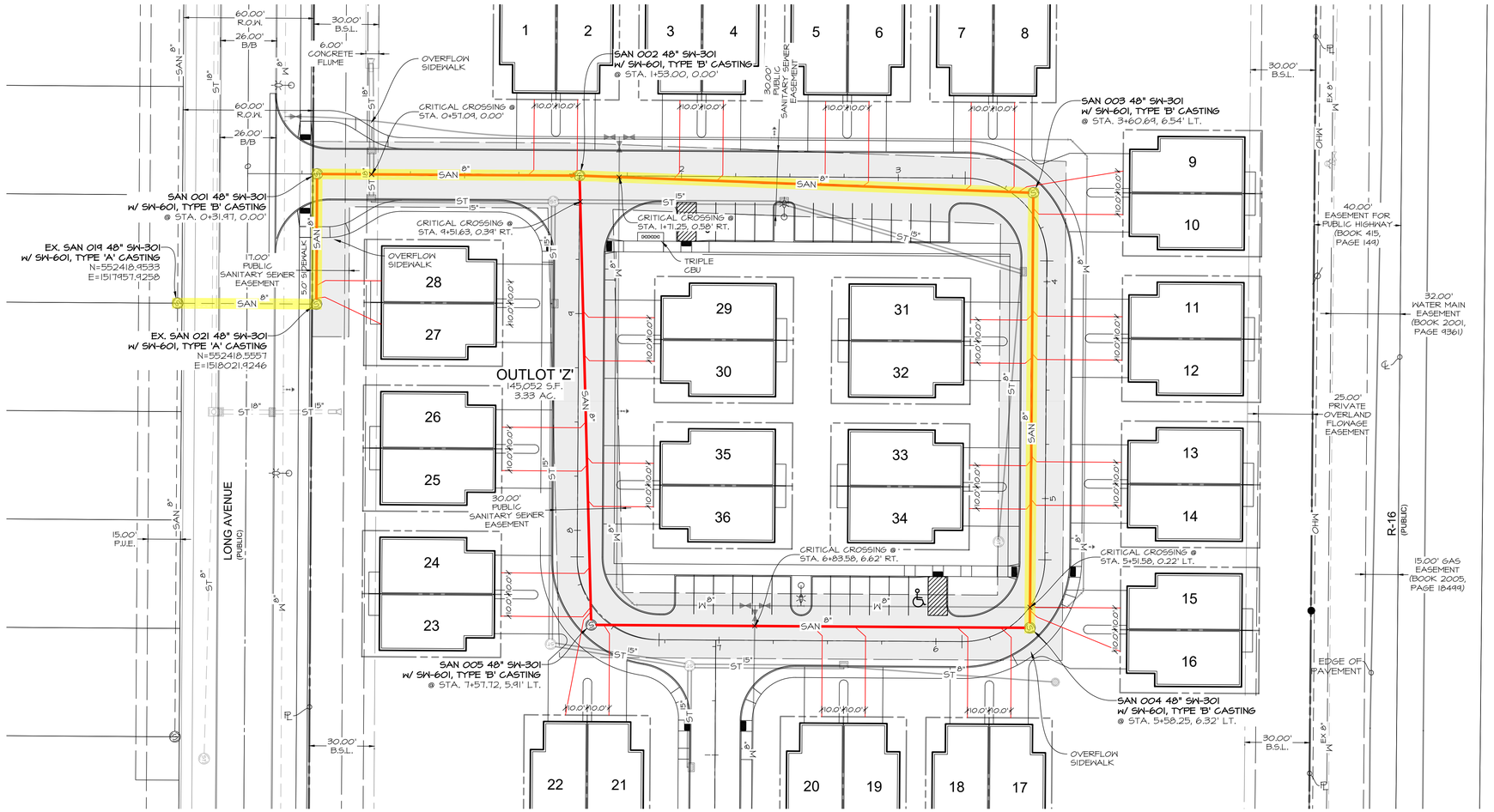

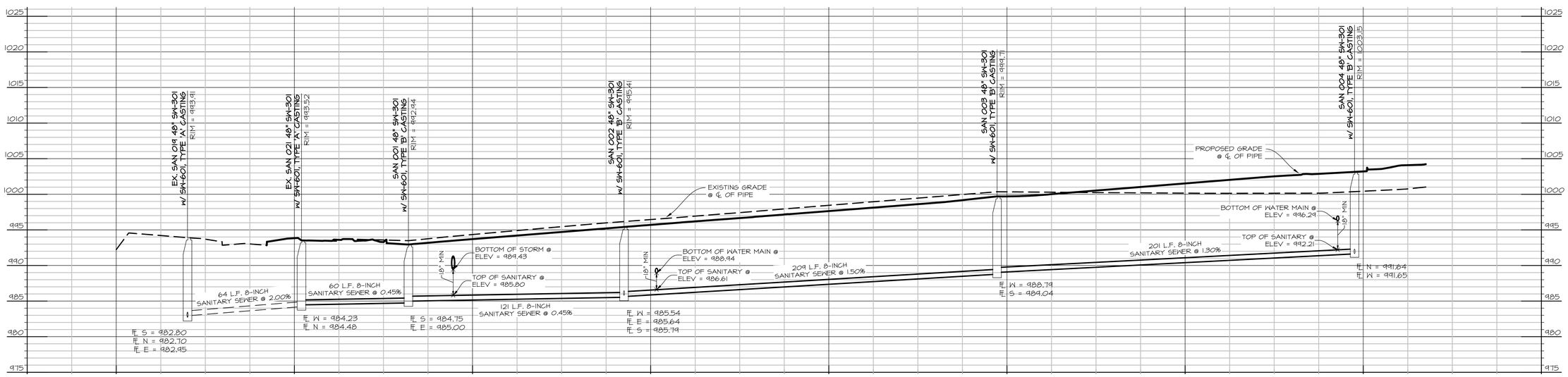

SCALE: 1"=30'
0' 10' 20' 30' 60'
1"=30' ON 34"x22" SHEET
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NORTH

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GRAND RIDGE ESTATES TOWNHOMES
2915 LONG AVENUE, VAN METER, IOWA

SANITARY SEWER PLAN & PROFILE

SHEET 04 OF 11

E-8663

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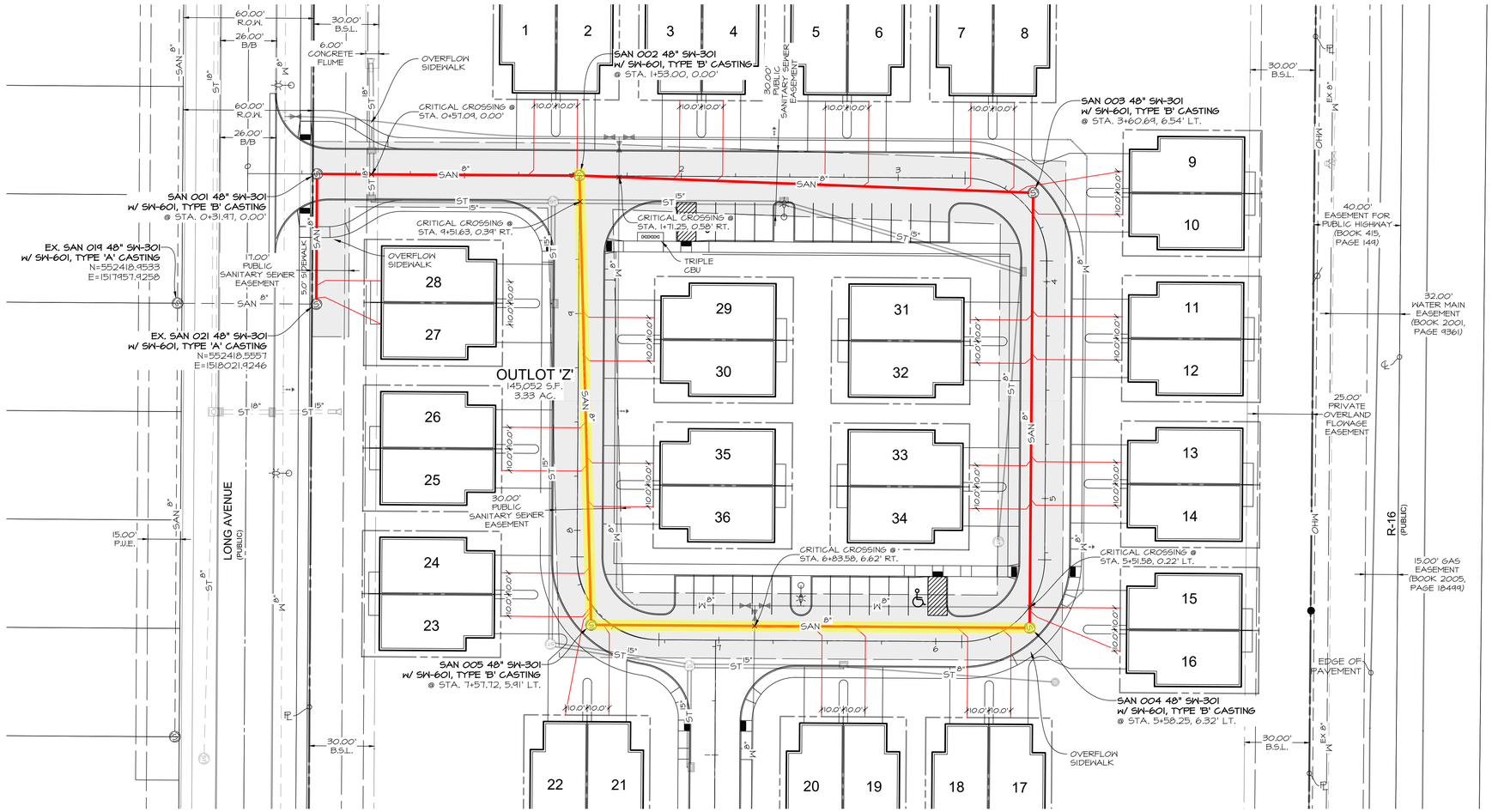

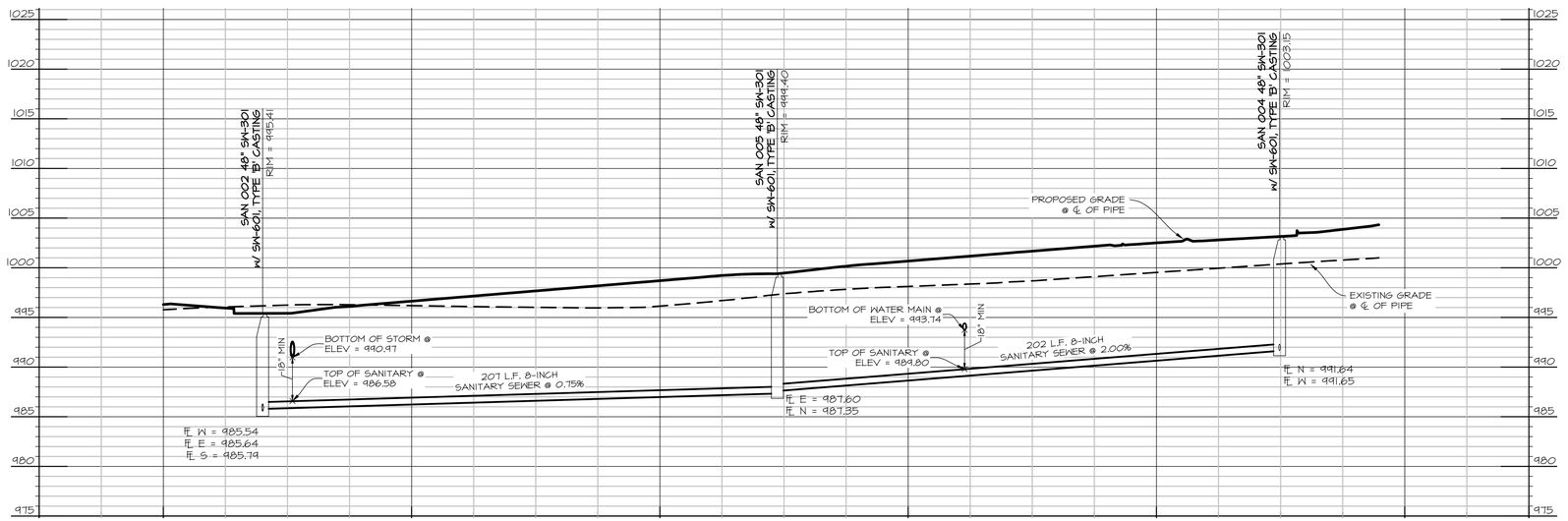

PRELIMINARY

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GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

SANITARY SEWER PLAN & PROFILE

SHEET 05 OF 11

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CRITICAL CROSSING NOTE:

PER IDNR GUIDELINES: WATER MAIN SHALL BE SEPARATED FROM GRAVITY SANITARY SEWER AND STORM SEWER MAINS BY HORIZONTAL DISTANCE OF AT LEAST 10 FEET. WATER MAINS CROSSING SANITARY OR STORM SEWERS SHALL BE LAID TO PROVIDE MINIMUM VERTICAL DISTANCE OF AT LEAST 18 INCHES BETWEEN OUTSIDE OF WATER MAIN AND OUTSIDE OF SEWER MAIN. WHERE STORM SEWER CROSSES OVER OR LESS THAN 18 INCHES BELOW WATER MAIN, LOCATE ONE FULL LENGTH OF SEWER PIPE OF WATER MAIN MATERIAL OR REINFORCED CONCRETE PIPE (RCP) WITH FLEXIBLE O-RING GASKET JOINTS SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM WATER MAIN.

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2915 LONG AVENUE, VAN METER, IOWA

STORM SEWER PLAN & PROFILE

SCALE: 1"=30'
0' 10' 20' 30' 60'
ON 34"X22" SHEET
1"=60' ON 11"X17" SHEET

NORTH

SHEET 06 OF 11

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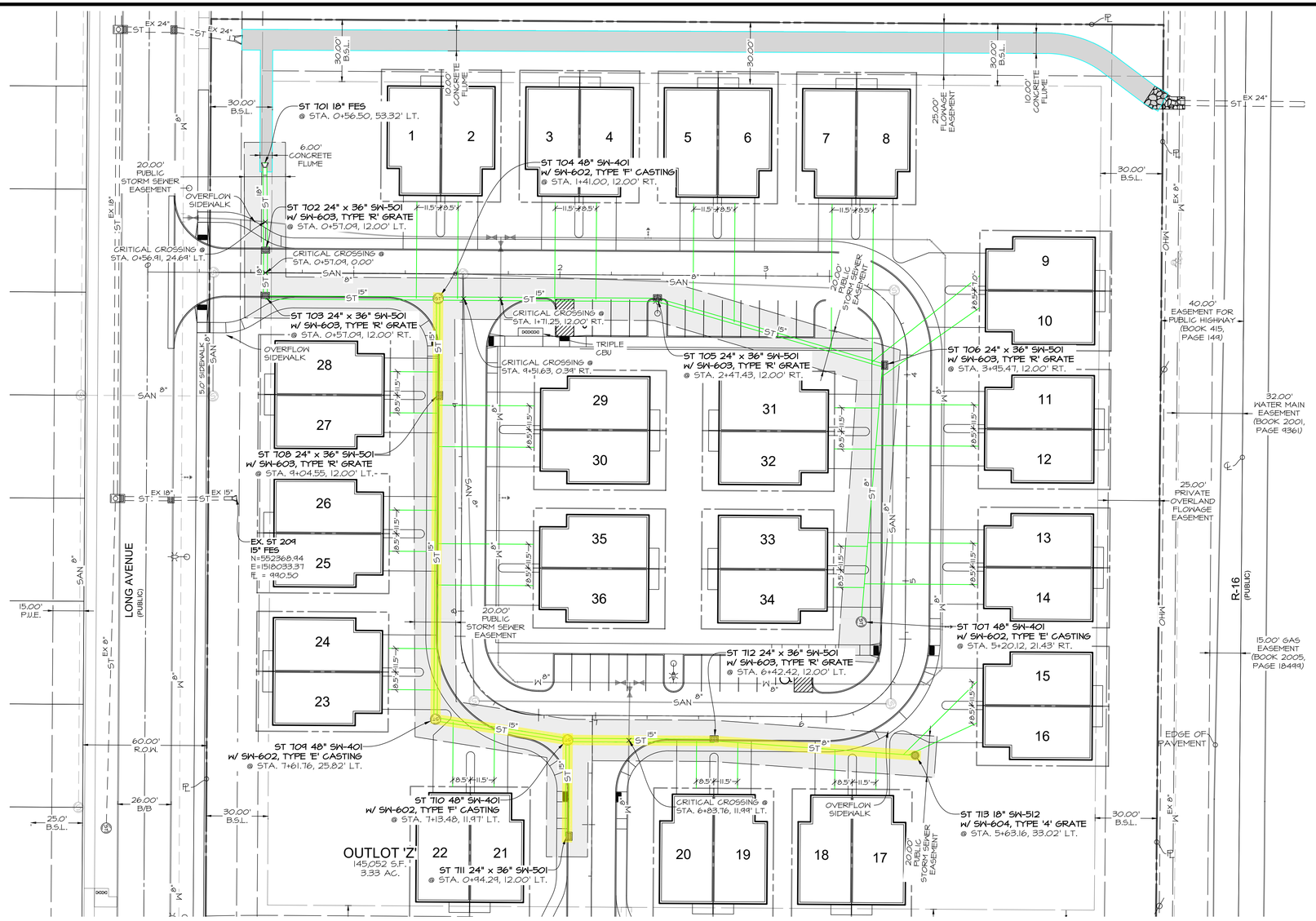

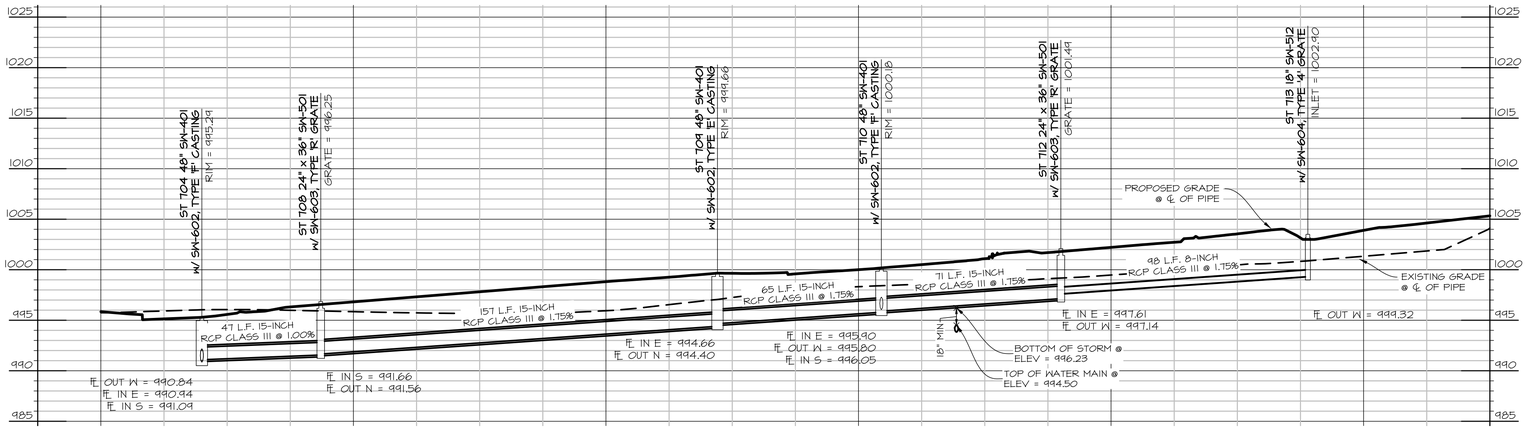

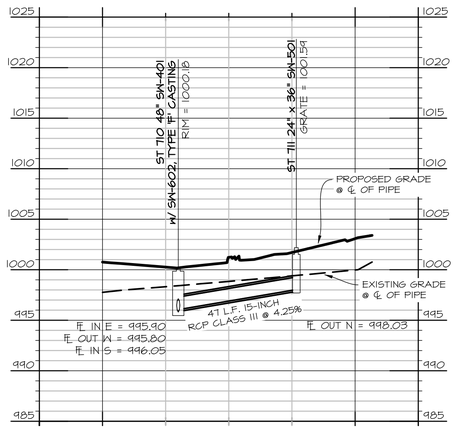

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2915 LONG AVENUE, VAN METER, IOWA

STORM SEWER PLAN & PROFILE

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DRAWN BY: AJR

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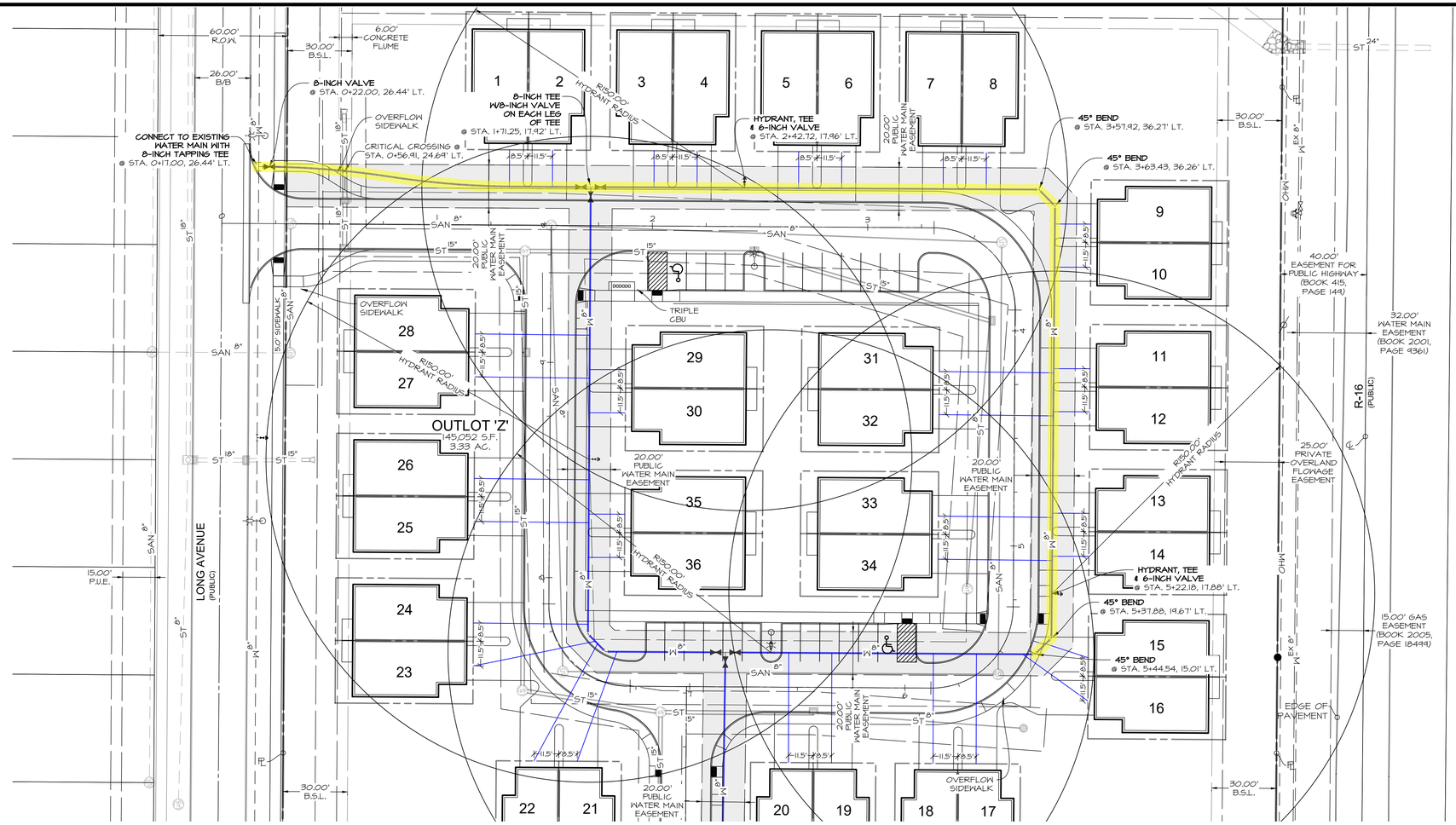

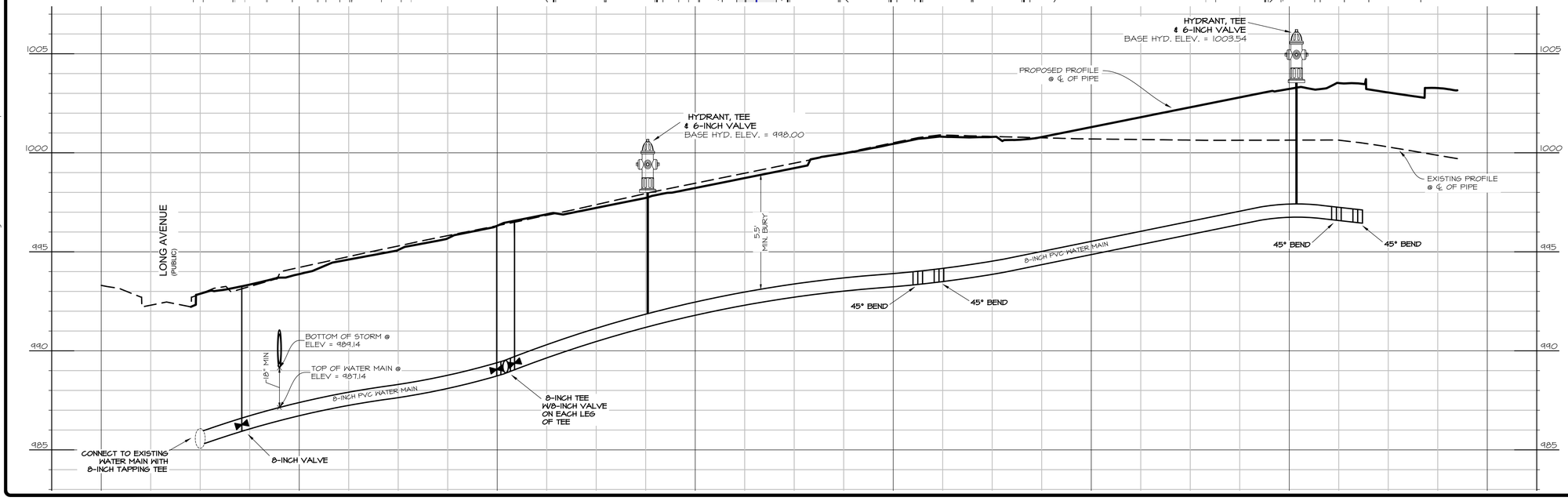

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GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

WATER MAIN PLAN & PROFILE

SHEET 08 OF 11

E-8663

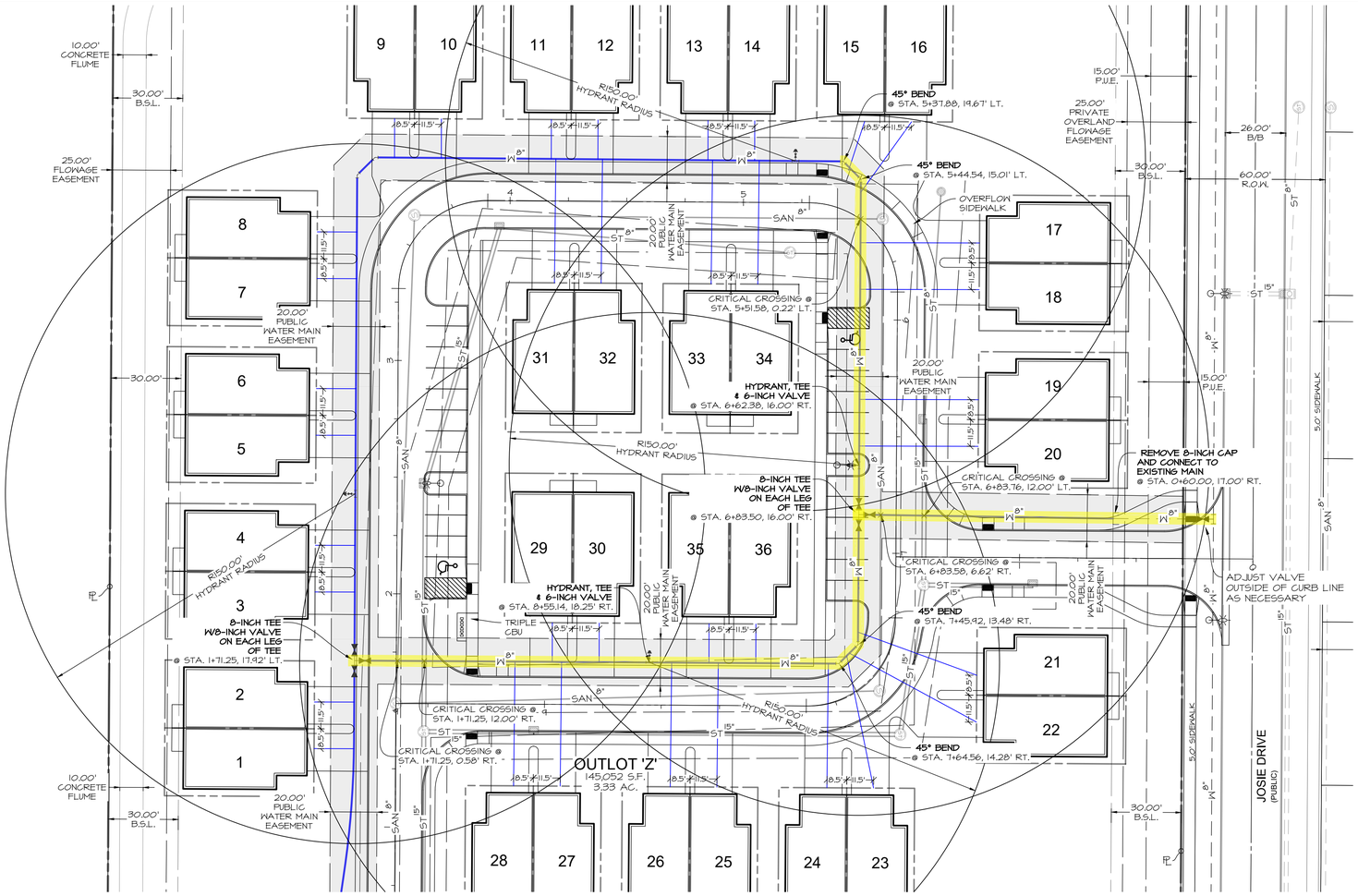
CEC
Civil Engineering Consultants, Inc.
2400 86th Street, Unit 12 . Des Moines, Iowa 50322
515.276.4884 . Fax: 515.276.7084 . mail@ceciac.com

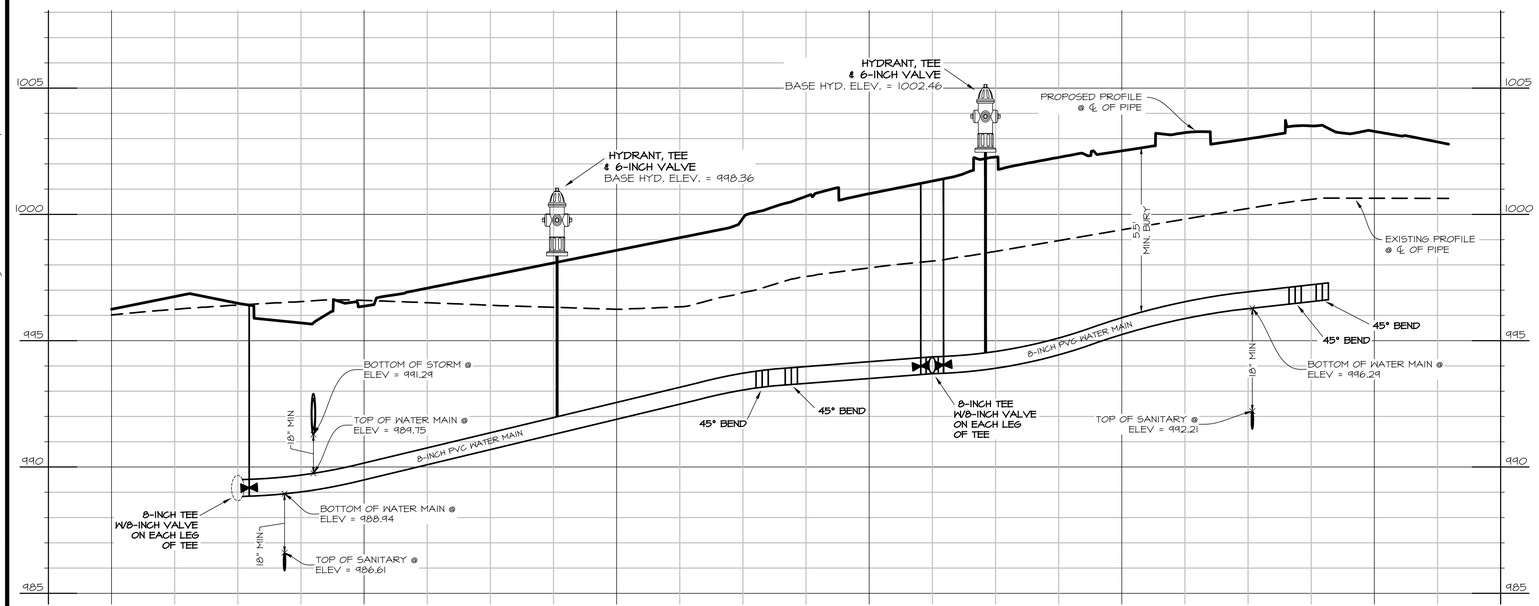
PUBLISH DATE: September 8, 2021

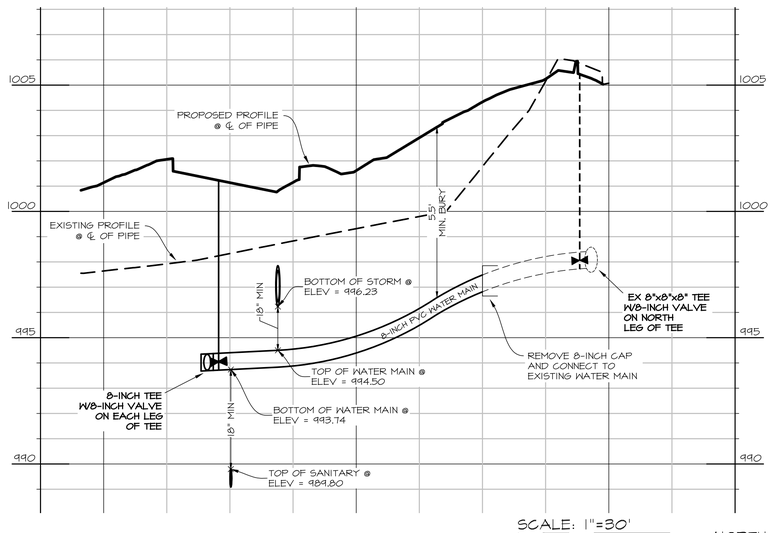
DATE OF SURVEY:	JUNE 16, 2020	PC
DESIGNED BY:		
DRAWN BY:		AJR

PLOT BY: AUSTIN ROEMER - 2021/09/08 - G:\E-FILES\E-8000\E8663_C3D Drawings\Construction Documents\Public Improvement\E8663 PI - UTILITY WATER.dwg - ANSI EXPAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 - CEC-ANSI TEST.CTB - PLOT SCALE = 1:1

PLOT BY: AUSTIN ROEMER - 2021/09/08 - G:\E-FILES\E-8000\E8663_C3D Drawings\Construction Documents\Public Improvement\E8663 PI - UTILITY WATER 2.dwg } - ANSI EXPAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 - CEC-XES TEST.CTB - PLOT SCALE = 1:1







SCALE: 1"=30'
0' 10' 20' 30' 60'
ON 34"x22" SHEET
1"=60' ON 11"x17" SHEET

NORTH

PRELIMINARY

CEC
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DESIGNED BY: A.JR
DRAWN BY:

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

WATER MAIN PLAN & PROFILE

SHEET 09 OF 11

E-8663

PROWAG RAMP NOTES:

1. RAMP SLOPES:
   - 6.25% TARGET
   - 8.33% MAX (ASBUILT)
2. CROSS SLOPE:
   - 1.5% TARGET
   - 2.0% MAX (ASBUILT)

SCALE: 1"=10'
0' 2' 4' 6' 8' 10' 20'
ON 34"x22" SHEET
1"=20' ON 11"x17" SHEET

NORTH

PRELIMINARY

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

PAVING DETAIL

SHEET 10 OF 11

E-8663

CEC
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2400 86th Street, Unit 12 . Des Moines, Iowa 50322
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PUBLISH DATE: September 6, 2021
DATE OF SURVEY: JUNE 16, 2020 PC
DESIGNED BY: MEH
DRAWN BY:

PLOT BY: AUSTIN ROEMER - 2021/09/08 - G:\E-FILES\E-8000\E8663_C3D Drawings\Construction Documents\Site Plan\E8663 SP - PAVING DETAIL.dwg] - ANSI EXPAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 - CEC-ASS TEST.CTB - PLOT SCALE = 1:1

R-16
(PUBLIC)

40.00' EASEMENT FOR PUBLIC HIGHWAY (BOOK 45, PAGE 149)

32.00' WATER MAIN EASEMENT (BOOK 2005, PAGE 4361)

15.00' GAS EASEMENT (BOOK 2005, PAGE 6449)

LOT 82
GRAND RIDGE ESTATES
PLAT 1

LOT 1

LOT 2

LOT 3

LOT 4

LOT 5

LOT 6

10.00' CONCRETE FLUME

25.00' FLOWAGE EASEMENT

30.00' B.S.L.

33.00' B.S.L.

26.00' B/B

60.00' R.O.W.

25.0' B.S.L.

15.00' P.U.E.

5.0' SIDEWALK

24.00' B/B

20.00' PUBLIC STORM SEWER EASEMENT

20.00' PUBLIC WATER MAIN EASEMENT

30.00' PUBLIC SANITARY SEWER EASEMENT

17.00' PUBLIC SANITARY SEWER EASEMENT

20.00' SANITARY SEWER EASEMENT

20.00' STORM SEWER & SURFACE FLOWAGE EASEMENT

OVERFLOW SIDEWALK

EXISTING OVERFLOW SIDEWALK

EXISTING RAMPS

JOSIE DRIVE
(PUBLIC)

LONG AVENUE
(PUBLIC)

OUTLOT 'Z'
145,052 S.F.
3.33 AC.

TRIPLE CBU

LOT	M.P.E.	F.F.E.	G.F.E.	B.F.E.
1	994.0	999.75	998.25	984.75
2	994.0	999.75	998.25	984.75
3	996.0	1001.00	999.50	991.00
4	996.0	1001.00	999.50	991.00
5	998.0	1002.00	1000.50	992.00
6	998.0	1002.00	1000.50	992.00
7	1000.5	1003.00	1001.50	993.00
8	1000.5	1003.00	1001.50	993.00
9	1005.0	1005.00	1003.50	995.00
10	1005.0	1005.00	1003.50	995.00
11	1005.0	1005.00	1003.50	995.00
12	1005.0	1005.00	1003.50	995.00
13	1006.5	1006.50	1005.00	996.50
14	1006.5	1006.50	1005.00	996.50
15	1008.5	1008.50	1006.50	998.50
16	1008.5	1008.50	1006.50	998.50
17	1007.0	1007.00	1005.50	997.00
18	1007.0			
19	1006.0	1006.00	1004.50	996.00
20	1006.0			
21		1003.00	1001.50	993.00
22				
23	994.5	1001.75	1000.25	991.75
24	994.5			
25	994.5	1001.25	999.75	991.25
26	994.5			
27	994.5	999.00	997.50	989.00
28	994.5			
29		1000.50	999.00	990.50
30				
31		1004.25	1002.75	994.25
32				
33		1005.00	1003.50	995.00
34				
35		1001.25	999.75	991.25
36				

100 YEAR HWE= 992.19

100 YEAR HWE= 991.44

SCALE: 1"=30'
0' 10' 20' 30' 60'
ON 34"x22" SHEET
1"=60' ON 11"x17" SHEET

NORTH

PRELIMINARY

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DATE OF SURVEY: JUNE 16, 2020

DESIGNED BY: PC

DRAWN BY: AJR

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

GRADING PLAN

SHEET
— OF 11

E-8663

PLOT BY: JUSTIN ROEHER - 2021/09/08 - G:\E-FILES\E-8000\E8663_CBD Drawing\Construction Documents\Site Plan\E8663 SP - GRADING.dwg] - ANSI B(PAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 - CEC-XES TEST.CTB - PLOT SCALE = 1:1

OFFICIAL'S STAMP

PRELIMINARY PLAT / SITE PLAN

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

UTILITIES
VAN METER PUBLIC WORKS
ADDRESS: 310 MILL STREET,
VAN METER, IOWA 50261
PHONE: (515) 996-2644

SANITARY SEWER - CITY OF VAN METER
STORM SEWER - CITY OF VAN METER
WATER - CITY OF VAN METER

ELECTRIC AND NATURAL GAS UTILITY
MIDAMERICAN ENERGY CORPORATION
666 GRAND AVENUE
DES MOINES, IA 50309
CONTACT: MATT REINHARDT
PHONE: 515-515-252-6413
EMAIL: MJREINHARDT@MIDAMERICAN.COM

TELEPHONE
CENTURY LINK
4201 KINGMAN BLVD. 2nd FLOOR
DES MOINES, IA 50311
CONTACT: CINDY CARTER
PHONE: 515-554-3316

BUILDING DEPARTMENT
CITY OF VAN METER
ADDRESS: 310 MILL STREET,
VAN METER, IOWA 50261
PHONE: (515) 996-2644

HEALTH DEPARTMENT
DALLAS COUNTY
PUBLIC HEALTH DEPARTMENT
ADDRESS: 25747 N AVENUE,
ADEL, IA 50003
PHONE: (515) 993-3750

FIRE DEPARTMENT
505 GRANT ST,
VAN METER, IA 50261
DIRECTOR DAGGETT: 515-202-4154
STATION PHONE NUMBER –515-993-4567

FRANCHISE UTILITIES
1. CONTRACT FOR STREET LIGHTING SHALL BE EXECUTED WITH FINAL PLAT.
2. CONTRACT FOR ELECTRIC DISTRIBUTION SYSTEM SHALL BE EXECUTED WITH FINAL PLAT.
3. NATURAL GAS, TELEPHONE, CABLE OR OTHER UTILITIES SHALL BE INSTALLED AFTER COMPLETION OF PLAT IMPROVEMENTS.

QUANTITIES

SANITARY SEWER
1,000 L.F. 8-INCH SANITARY SEWER
5 EA. SW-301 MANHOLE
36 EA. SERVICES

STORM SEWER
223 L.F. 8-INCH PVC
668 L.F. 15-INCH RCP CLASS III
67 L.F. 18-INCH RCP CLASS III
4 EA. SW-401 MANHOLE
1 EA. SW-501 INTAKE W/ SW-603 'R' GRATE
6 EA. SW-503 INTAKE W/ SW-602 'E' CASTING & SW-603 'R' GRATE
1 EA. SW-512 INTAKE W/ SW-604 TYPE '3' GRATE
36 EA. SERVICES

WATER MAIN
1,113 L.F. 8-INCH WATER MAIN
4 EA. 8-INCH VALVE
1 EA. 8"x8"x8" TAPPING TEE
2 EA. 8"X8"X8" TEE
4 EA. HYDRANT, TEE & 6-INCH VALVE
36 EA. SERVICES

PAVING
3,430 S.Y. 7-INCH NON-REINFORCED P.C.C..
3,933 S.Y. 12" SUBGRADE PREP.
345 S.Y. 5-INCH NON REINFORCED CONCRETE FLUME (517 L.F.)

VICINITY MAP
1" = 1000'
NORTH

GENERAL LEGEND

PROPOSED
PLAT BOUNDARY
SECTION LINE
LOT LINE
CENTERLINE
EASEMENT LINE
FLARED END SECTION
DRAIN BASIN OR SEDIMENT RISER
DRAIN BASIN WITH SOLID GRATE
WATER VALVE
FIRE HYDRANT ASSEMBLY
BLOW-OFF HYDRANT
SCOUR STOP MAT
TURF REINFORCEMENT MAT
STORM SEWER WITH SIZE
SUBDRAIN
WATER SEWER WITH SIZE
WATER SERVICE
PROPOSED CONTOUR
SILT FENCE
ADDRESS
RIPRAP

EXISTING
LOT LINE
SANITARY/STORM MANHOLE
WATER VALVE
FIRE HYDRANT
STORM SEWER SINGLE INTAKE
STORM SEWER DOUBLE INTAKE
STORM SEWER ROUND INTAKE
FLARED END SECTION
DECIDUOUS TREE
CONIFEROUS TREE
SHRUB
POWER POLE
STREET LIGHT
GUY ANCHOR
ELECTRIC TRANSFORMER
GAS METER
TELEPHONE RISER
SIGN
CATV UNDERGROUND TELEVISION
UGE UNDERGROUND ELECTRIC
G UNDERGROUND GAS
UGFO UNDERGROUND FIBER OPTIC
UGT UNDERGROUND TELEPHONE
OHW OVERHEAD ELECTRIC
SAN 8" SANITARY SEWER WITH SIZE
ST 12" STORM SEWER WITH SIZE
W 8" WATER MAIN WITH SIZE
926 EXISTING CONTOUR
TREELINE
B.S.L. BUILDING SETBACK LINE
P.U.E. PUBLIC UTILITY EASEMENT
M.O.E. MINIMUM OPENING ELEVATION

Sheet List Table

Sheet Number	Sheet Title
01	SITE PLAN COVER SHEET
02	SITE PLAN NOTES & INFORMATION
03	SITE PLAN DETAIL SHEET
04	GEOMETRIC SHEET
05	DIMENSION PLAN
06	SANITARY SEWER PLAN
07	STORM SEWER PLAN
08	WATER MAIN PLAN
09	PAVING PLAN
10	PAVING DETAIL
11	PAVING DETAIL
12	GRADING PLAN

SUBMITTAL TABLE

SUBMITTAL DATE	SUBMITTAL NOTES
AUGUST 10, 2021	INITIAL SUBMITTAL
AUGUST 20, 2021	
SEPTEMBER 8, 2021	

PROPERTY OWNER / DEVELOPER / APPLICANT:
VAN METER LAND COMPANY, LLC
9400 PLUM DRIVE, SUITE 100
URBANDALE, IOWA 50322
CONTACT: DUSTIN JONES
PH. 515-225-6677
EMAIL: DJONES@ACGIOWA.COM

PROJECT MANAGER:
PAUL CLAUSEN, PE,
CIVIL ENGINEERING CONSULTANTS
2400 86TH STREET, #12
DES MOINES, IOWA 50322
PH. 515-276-4884 EXT. #217
EMAIL: CLAUSEN@CECLAC.COM

PROFESSIONAL LAND SURVEYOR:
CIVIL ENGINEERING CONSULTANTS, INC.
PH: JEFFERY A. GADDIS, PLS
2400 86TH STREET, SUITE 12
URBANDALE, IA 50322
PH. 515-276-4884 EXT. 221
EMAIL: GADDIS@CECLAC.COM

MUNICIPALITY PLANNER:
KYLE MICHEL
CITY ADMINISTRATOR
CITY OF VAN METER, IOWA
PHONE: (515) 996-2644
EMAIL: KMICHEL@VANMETERIA.GOV

LEGAL DESCRIPTION
LOT 83, GRAND RIDGE ESTATES PLAT 1, AN OFFICIAL PLAT RECORDED IN BOOK XXXX, PAGE XXX AT THE DALLAS COUNTY RECORDER'S OFFICE AND CONTAINING 4.87 ACRES MORE OR LESS.

TOTAL LAND AREA:
212,060 SQ. FT
4.87 AC.

EXISTING ZONING:
GRAND ESTATES P.U.D.
R-3 - MULTIPLE FAMILY

FLOOD ZONE
ZONE 'X' ACCORDING TO FEMA FLOOD INSURANCE RATE MAPS.
COMMUNITY-PANEL #19181C0107G
MAP REVISED NOVEMBER 16, 2018.

NOTES
1. IMPROVEMENTS SHALL BE CONSTRUCTED USING 2021 S.U.D.A.S. SPECIFICATIONS

CONSTRUCTION SCHEDULE
GRADING ACTIVITIES - OCTOBER, 2021
UTILITY PLACEMENT - NOVEMBER, 2021
PAVING - MAY, 2022
PUNCH LIST ITEMS - JUNE, 2022

*** THIS LAND SURVEYOR'S CERTIFICATION DOES NOT INCLUDE DESIGN SPOT ELEVATIONS, MINIMUM PROTECTION ELEVATIONS, MINIMUM OPENING ELEVATIONS, MINIMUM BASEMENT ELEVATIONS, DETENTION BASIN & STORM WATER EVENT ELEVATIONS, OR ANY OTHER ITEMS THAT MAY FALL UNDER THE PRACTICE OF A PROFESSIONAL CIVIL ENGINEER. ***

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

CERTIFICATIONS

PRELIMINARY

I HEREBY CERTIFY THAT THIS LAND SURVEYING DOCUMENT WAS PREPARED AND THE RELATED SURVEY WORK WAS PERFORMED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF IOWA.

September 8, 2021
JEFFREY A. GADDIS, IOWA LICENSE NO. 18381 DATE
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2022

PRELIMINARY

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.

PAUL J.D. CLAUSEN, IOWA LICENSED NO. 23772 DATE
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2021
PAGES OR SHEETS COVERED BY THIS SEAL:
ALL SHEETS

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DRAWN BY: AJR

PRELIMINARY

GRAND RIDGE ESTATES TOWNHOMES
2915 LONG AVENUE, VAN METER, IOWA

SITE PLAN COVER SHEET

SHEET 01 OF 12

E-8663

PLOT BY : AUSTIN ROEMER - 2021/09/08 - q:\E-FILES\E-8000\E8663_c3d drawings\construction documents\Site Plan\E8663 SP COVER.dwg) - ANSI EXPAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 - CEC-XES TEST.CTB - PLOT SCALE = 1:1

GENERAL NOTES

1. ALL CONSTRUCTION (PUBLIC & PRIVATE) SHALL BE IN ACCORDANCE WITH 2021 EDITION OF S.U.D.A.S. STANDARD SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR TESTING AND INSPECTION AND NOTIFY FOLLOWING AT LEAST ONE WEEK PRIOR TO BEGINNING CONSTRUCTION:
   a. CITY OF VAN METER (515-996-2644).
   b. VAN METER LAND COMPANY, LLC (515-225-6677)
   c. CIVIL ENGINEERING CONSULTANTS, INC. (515-278-4884)
   d. IOWA ONE-CALL
2. PARKLAND DEDICATION WAS SATISFIED WITH GRAND RIDGE ESTATES PLAT 1.
3. CONTRACTOR SHALL VERIFY LOCATION AND PROTECT ALL UTILITIES AND STRUCTURES. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY CONTRACTOR AT CONTRACTOR'S EXPENSE TO SATISFACTION OF OWNER.
4. CIVIL ENGINEERING CONSULTANTS INC. IS NOT A GEOTECHNICAL ENGINEER, GEOTECHNICAL REPORT IS AVAILABLE BY CONTACTING ENGINEER. CONTRACTORS AND BIDDERS SHALL REFER TO AND FOLLOW RECOMMENDATIONS OF GEOTECHNICAL REPORT PREPARED BY ALLENDER BUTZKE (PN161238).
5. SOME LOTS ACCEPT DRAINAGE FROM ADJACENT PROPERTY. BUILDING ON THESE LOTS MUST TAKE INTO ACCOUNT UPSTREAM DRAINAGE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT LOCATIONS OF UTILITY SERVICES.
7. ALL UTILITIES INDICATED ON PLAT ARE PUBLIC UNLESS OTHERWISE NOTED.
8. LOCATION OF EXISTING FACILITIES AND APPURTENANCES SHOWN ON PLAN ARE BASED ON AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING TO DETERMINE EXACT FACILITIES LOCATIONS. CIVIL ENGINEERING CONSULTANTS, INC. DOES NOT GUARANTEE LOCATION OF EXISTING FACILITIES AS SHOWN, OR THAT ALL EXISTING FACILITIES ARE SHOWN. IT IS CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL PUBLIC AND PRIVATE UTILITY PROVIDERS SERVING AREA, AND IOWA ONE CALL, TO DETERMINE EXTENT AND PRECISE LOCATION OF EXISTING FACILITIES BEFORE CONSTRUCTION BEGINS.
9. CONTRACTOR SHALL PROTECT EXISTING ON-SITE FACILITIES FROM DAMAGE RESULTING FROM CONTRACTOR'S WORK. IF DAMAGE, BREAKAGE, INTERRUPTION OF SERVICE, ETC. OF EXISTING FACILITIES DOES OCCUR CONTRACTOR SHALL IMMEDIATELY CONTACT UTILITY'S OWNER.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY FARM TILE DAMAGE DURING CONSTRUCTION AND RECORDING LOCATION OF TILE. CONTRACTOR SHALL RECONNECT ALL FIELD TILE INTERCEPTED DURING CONSTRUCTION.
11. ANY CHANGES TO CONSTRUCTION DRAWINGS DURING CONSTRUCTION SHALL BE APPROVED IN WRITING BY CITY OF VAN METER PUBLIC WORKS DEPARTMENT.
12. CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES MADE DURING CONSTRUCTION THAT HAVE NOT BEEN APPROVED IN WRITING BY CITY OF VAN METER PUBLIC WORKS DEPARTMENT.
13. CONTRACTOR SHALL NOTIFY CITY OF VAN METER PUBLIC WORKS DEPARTMENT 48-HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ON HOLIDAY OR WEEKEND.
14. ALL CONSTRUCTION STAKING SHALL BE PERFORMED BY LICENSED ENGINEER OR LAND SURVEYOR.
15. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON PLANS SHALL RELIEVE CONTRACTOR FROM COMPLYING WITH ALL APPLICABLE SAFETY REGULATIONS.
16. CONTRACTOR SHALL CONDUCT CLEAN-UP, SURFACE RESTORATION, AND SURFACE REPLACEMENT ACTIVITIES AS CONSTRUCTION PROGRESSES. ALL DEBRIS SPILLED ON R.O.W. OR ON ADJACENT PROPERTY SHALL BE PICKED UP BY CONTRACTOR AT END OF EACH DAY.
17. IF DISCREPANCY EXISTS BETWEEN DETAILED PLANS AND QUANTITIES, PLANS SHALL GOVERN.
18. LOCATIONS OF ALL UTILITY SERVICES SHALL BE CLEARLY MARKED AND LOCATION INFORMATION SHALL BE GIVEN TO CITY OF VAN METER.
19. ALL STATIONING IS BASED ON STREET CENTERLINE MEASUREMENT AND SPECIFICATIONS.

SANITARY NOTES

1. CASTING TYPES ARE FROM S.U.D.A.S. SPECS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT LOCATIONS OF ALL SANITARY SEWER SERVICES & PROVIDING THIS INFORMATION TO ENGINEER AND CITY OF VAN METER.
3. CONTRACTOR SHALL CLEAN AND VIDEO TAPE SANITARY SEWER AT PROJECT COMPLETION. COPY OF VIDEO SHALL BE PROVIDED TO CITY OF VAN METER PUBLIC WORKS DEPARTMENT.
4. ALL MANHOLES TO HAVE I&I BARRIERS.
5. ALL MANHOLES AND MANHOLE CASTINGS MUST BE ROTATED AS REQUIRED TO AVOID MANHOLE CONFLICTS WITH SIDEWALKS.

STORM NOTES

1. PROVIDE APRON GUARDS & CONCRETE FOOTINGS ON ALL FLARED END SECTIONS. CONTRACTOR SHALL TIE LAST THREE PIPE JOINTS AT FLARED END SECTION.
2. ALL STORM SEWER ARE TO BE CLEANED AND VIDEO TAPED UPON COMPLETION. COPY OF VIDEO SHALL BE PROVIDED TO CITY OF VAN METER PUBLIC WORKS DEPARTMENT.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT LOCATIONS OF ALL STORM SEWER SERVICES & PROVIDING THIS INFORMATION TO ENGINEER.
4. SUMP SERVICE LINES WILL BE CONNECTED TO STORM SEWER, NOT SUB-DRAIN LINES.
5. ALL PRIVATE INFRASTRUCTURE SHALL BE OWNED AND MAINTAINED BY OWNER.
6. STORM SEWER SHALL BE OPEN JOINTED.

WATER NOTES

1. PIPE MATERIALS: AWWA C900 DR - 18 PVC INSTALL NO. 10 THHN STANDARD COPPER TRACER WIRE TO SURFACE AT FIRE HYDRANTS.
2. CONTRACTOR SHALL PROTECT AND BACKFILL AROUND ALL UTILITIES AND STRUCTURES. BACKFILL SHALL BE IN 6-INCH LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY, AT 0% TO +4% OPTIMUM MOISTURE CONTENT.
3. HYDRANTS, MANHOLE COVERS AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED GRADE ELEVATIONS.
4. SERVICES TO BE 1-INCH NON-METALLIC AND SHALL BE BORED WHEN FEASIBLE, STOP BOXES TO BE FORD BALL VALVE TYPE CURB STOPS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT LOCATION OF ALL WATER SERVICES AND PROVIDING THIS INFORMATION TO ENGINEER AND CITY OF VAN METER.
6. HYDRANTS SHALL BE SET NOT MORE THAN 4 FEET FROM CENTER OF WATER MAIN.
7. AN APPROVED SADDLE SHALL BE USED FOR ALL WATER SERVICE TAPS.
8. VALVES SHALL BE CLOW RW GATE.
9. CURB STOPS SHALL BE LOCATED NO FARTHER THAN 10" INSIDE R.O.W. FROM PROPERTY LINE. UNDER NO CIRCUMSTANCES SHALL THEY BE LOCATED IN SIDEWALK.
10. ALL SERVICE LINES SHALL BE TESTED WITH WATER MAIN.
11. WHERE SEWERS CROSS OVER OR LESS THAN 18-INCHES BELOW WATER MAIN:
    a. STORM SEWERS: FLEXIBLE O-RING-GASKET JOINTS RATED AT 13 PSI OR GREATER SHALL BE UTILIZED UNTIL NORMAL DISTANCE FROM SEWER TO WATER MAIN IS 10' MIN.
    b. ONE FULL LENGTH OF WATER MAIN SHALL BE LOCATED SO THAT BOTH JOINTS AREA AS FAR AS POSSIBLE FROM SEWER.
    c. SEWER MUST BE ADEQUATELY SUPPORTED.
    d. LOW PERMEABLE SOIL SHALL BE USED FRO BACKFILL WITHIN 10' OF POINT OF CROSSING.
    e. SANITARY SEWERS SHALL BE CONSTRUCTED OF WATER MAIN MATERIAL FOR 20' CENTERED ON WATER MAIN.
12. ALL STORM SEWER CROSSING ABOVE WATER MAIN WILL NEED TO INSTALL O-RING JOINT PIPE FOR 20' CENTERED OVER WATER MAIN.
13. SPECIAL CARE MUST BE USED TO AVOID AIR ENTRAPMENT AT AREA WHERE WATER MAIN DIPS.

PAVING NOTES

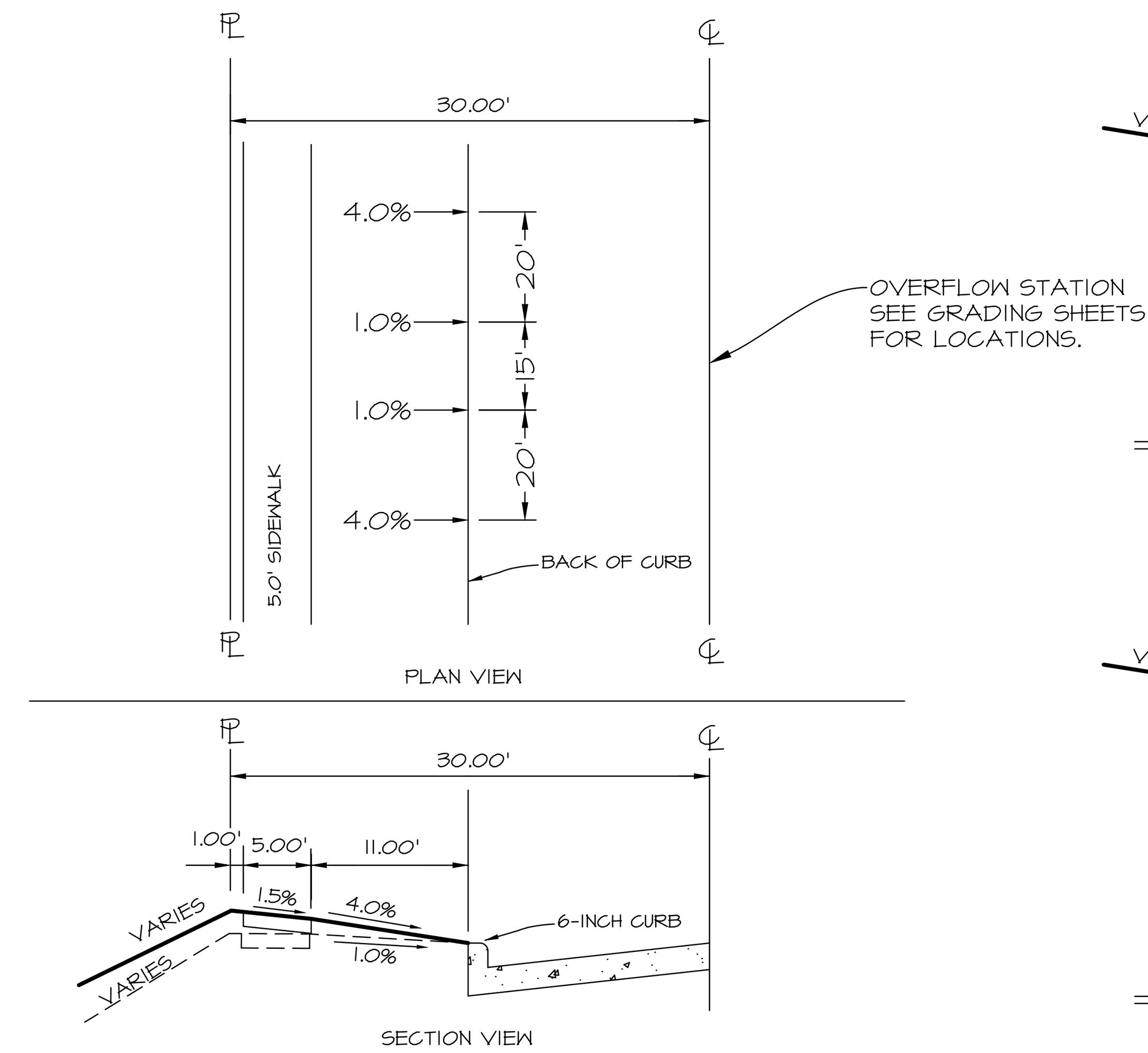
1. ALL ELEVATIONS ARE PROPOSED FINISHED GRADE AT CENTERLINE UNLESS OTHERWISE NOTED.
2. ALL STREETS SHALL HAVE 6-INCH CURBS UNLESS NOTED OTHERWISE.
3. PROVIDE CURB DROPS FOR SIDEWALKS AT INTERSECTIONS.
4. CONTRACTOR SHALL FOLLOW PAVEMENT RECOMMENDATIONS OF GEOTECHNICAL REPORT PREPARED BY ALLENDER BUTZKE (PN161238).
5. CITY OF VAN METER SHALL BE NOTIFIED OF ALL SUBGRADE TREATMENTS PRIOR TO USE.
6. SPECIAL CARE IS REQUIRED IN AREAS OF FILL TO MINIMIZE THE AMOUNT OF SETTLEMENT AND POTENTIAL FOR CRACKING.

NPDES/SWPPP

1. OWNER AND/OR CONTRACTOR ARE REQUIRED TO OBTAIN NPDES PERMIT AND FOLLOW REQUIREMENTS OF ASSOCIATED STORM WATER POLLUTION PREVENTION PLAN PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.

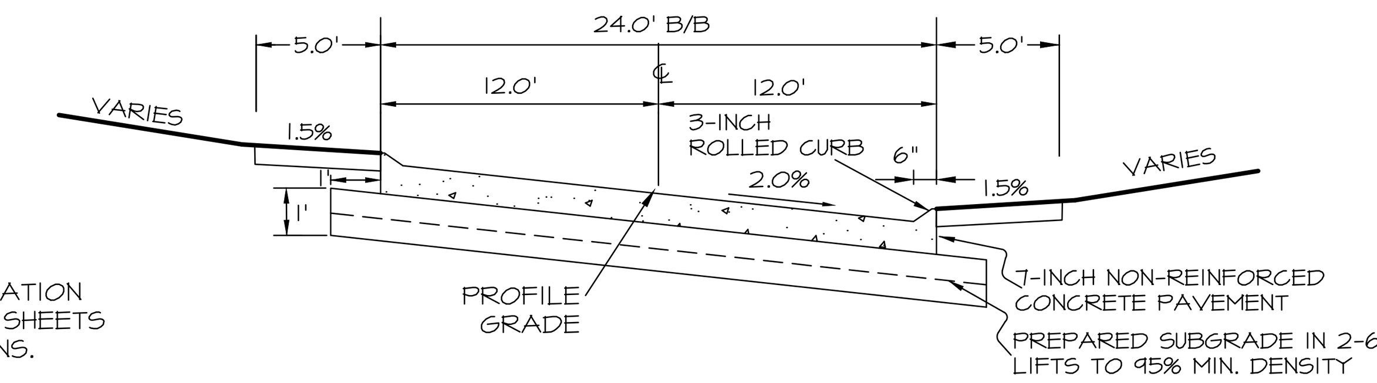
GRADING NOTES

1. STRIP TOPSOIL FROM ALL AREAS WHICH ARE TO RECEIVE STRUCTURAL FILL.
2. ALL AREAS TO RECEIVE FILL TO BE BENCHED.
3. PREPARE BOTTOM OF BENCH FOR FILL BY DISCING TO DEPTH OF 6-INCHES.
4. ALL SITE GRADING FILL SHALL BE COMPACTED TO DENSITY NOT LESS THAN 95% STANDARD PROCTOR. MOISTURE CONTENT OF FILL MATERIAL SHALL MATCH URBAN STANDARD.
5. MAINTAIN ALL CUT AND FILL AREAS FOR SURFACE DRAINAGE AT ALL TIMES.
6. FINAL GRADES WITHIN PAVED AREAS SHALL BE WITHIN 0.1' OF PLAN GRADE, ALL OTHER AREAS TO BE WITHIN 0.2' OF PLAN GRADE.
7. STRIP BLACK DIRT AND RE-SPREAD. (8" MINIMUM)
8. ADDITIONAL SILT FENCING MAY BE REQUIRED AFTER CITY FIELD INSPECTION.
9. SPECIAL CARE MUST BE TAKEN IN AREAS OF FILL TO REDUCE THE RISK OF SETTLEMENT AND SAGGING.
10. AREAS TO BE SURCHARGED SHALL BE STRIPPED PRIOR TO SURCHARGING.



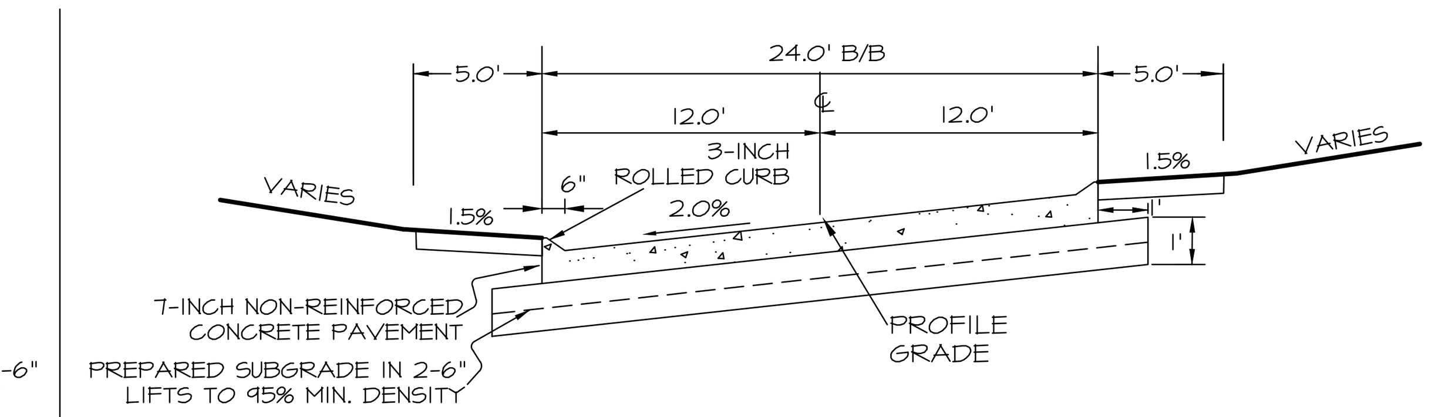
TYPICAL OVERFLOW ROUTE FOR PUBLIC STREET

NO SCALE



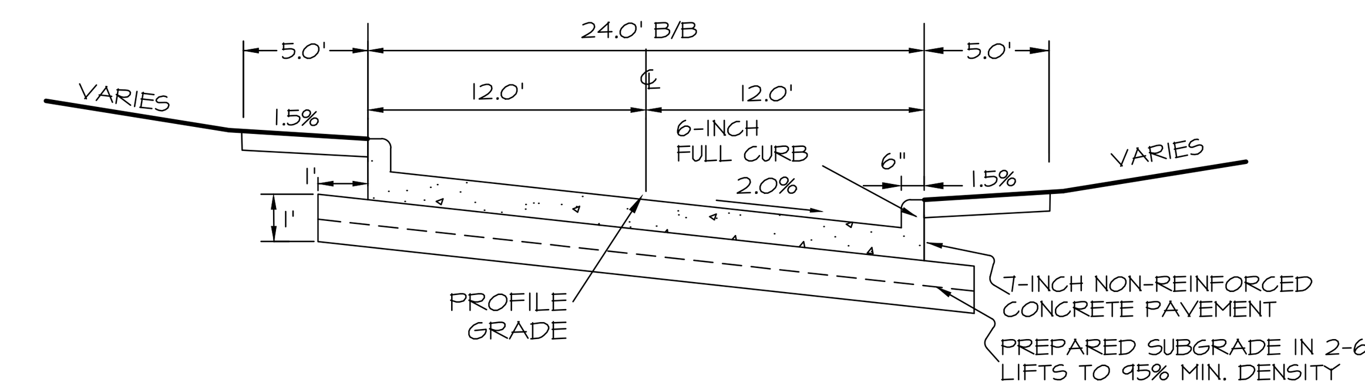
TYPICAL 24' B/B ROLLED CURB CROSS SECTION

NO SCALE



TYPICAL 24' B/B ROLLED CURB CROSS SECTION

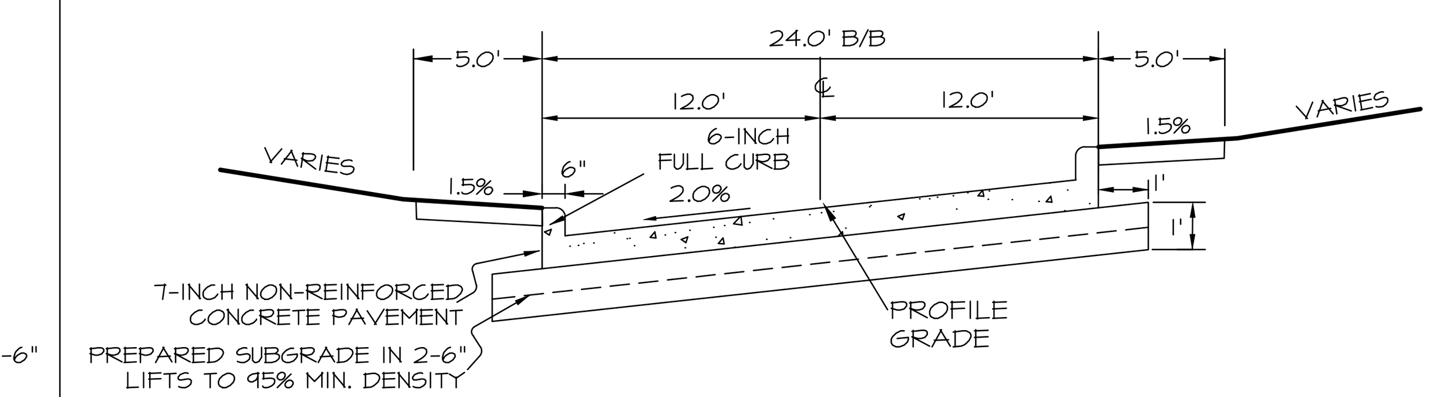
NO SCALE



TYPICAL 24' B/B FULL CURB CROSS SECTION

NO SCALE

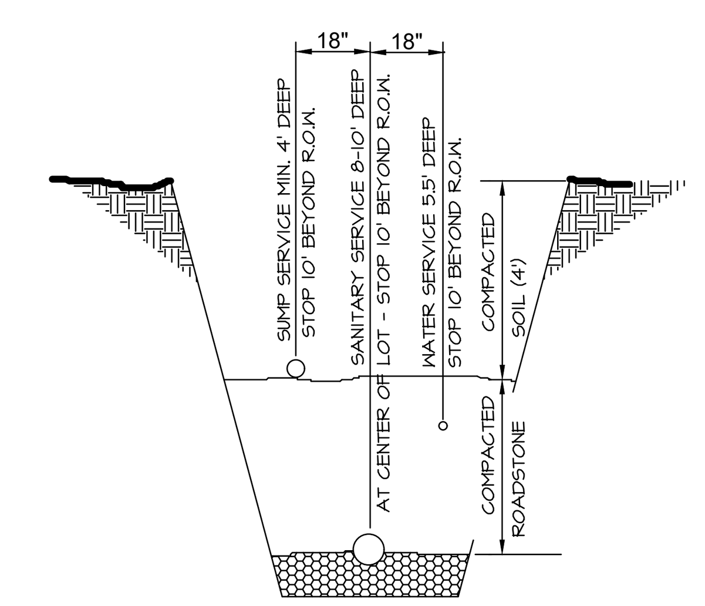
SLOPED TO THE RIGHT



TYPICAL 24' B/B FULL CURB CROSS SECTION

NO SCALE

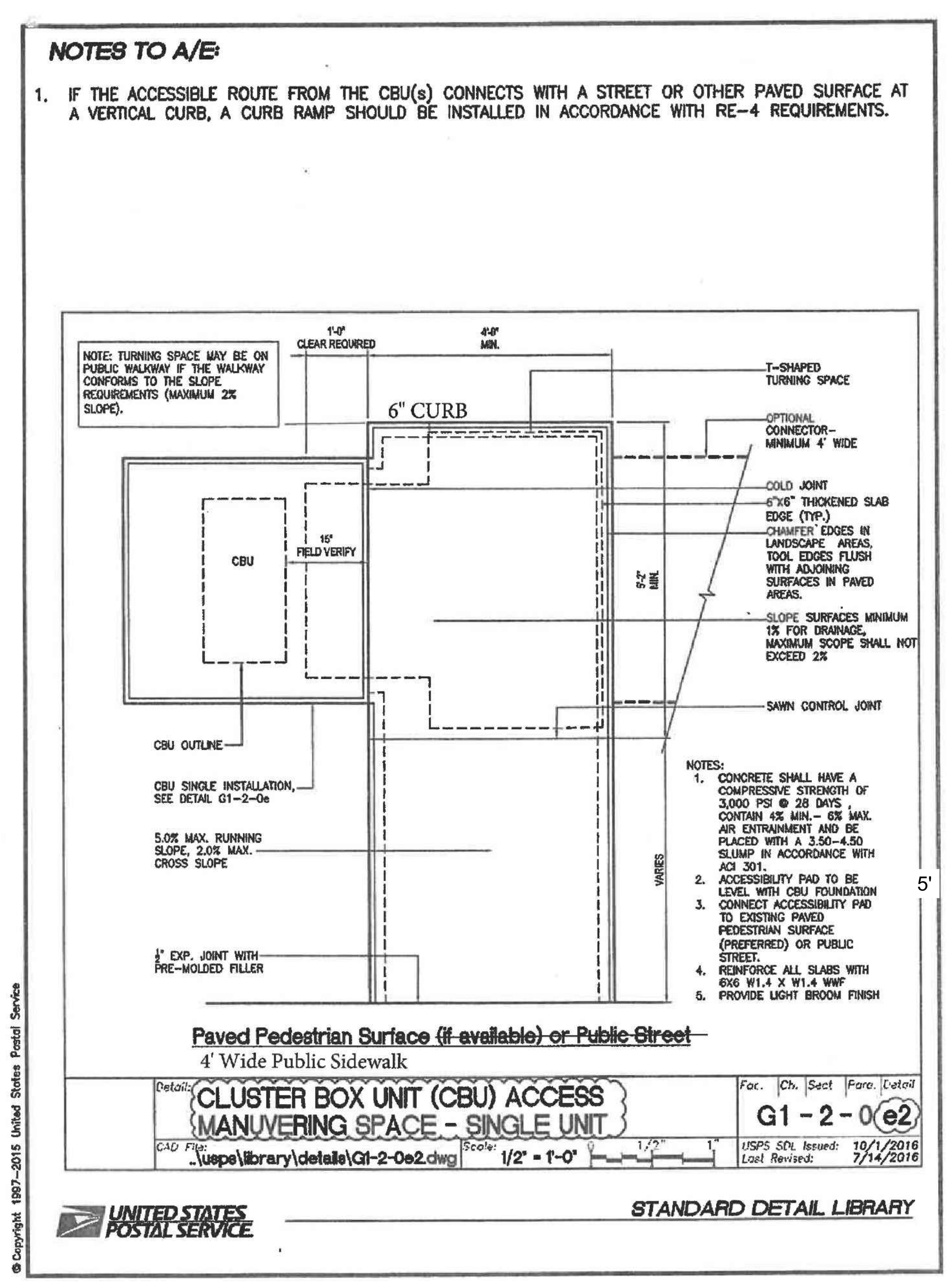
SLOPED TO THE LEFT

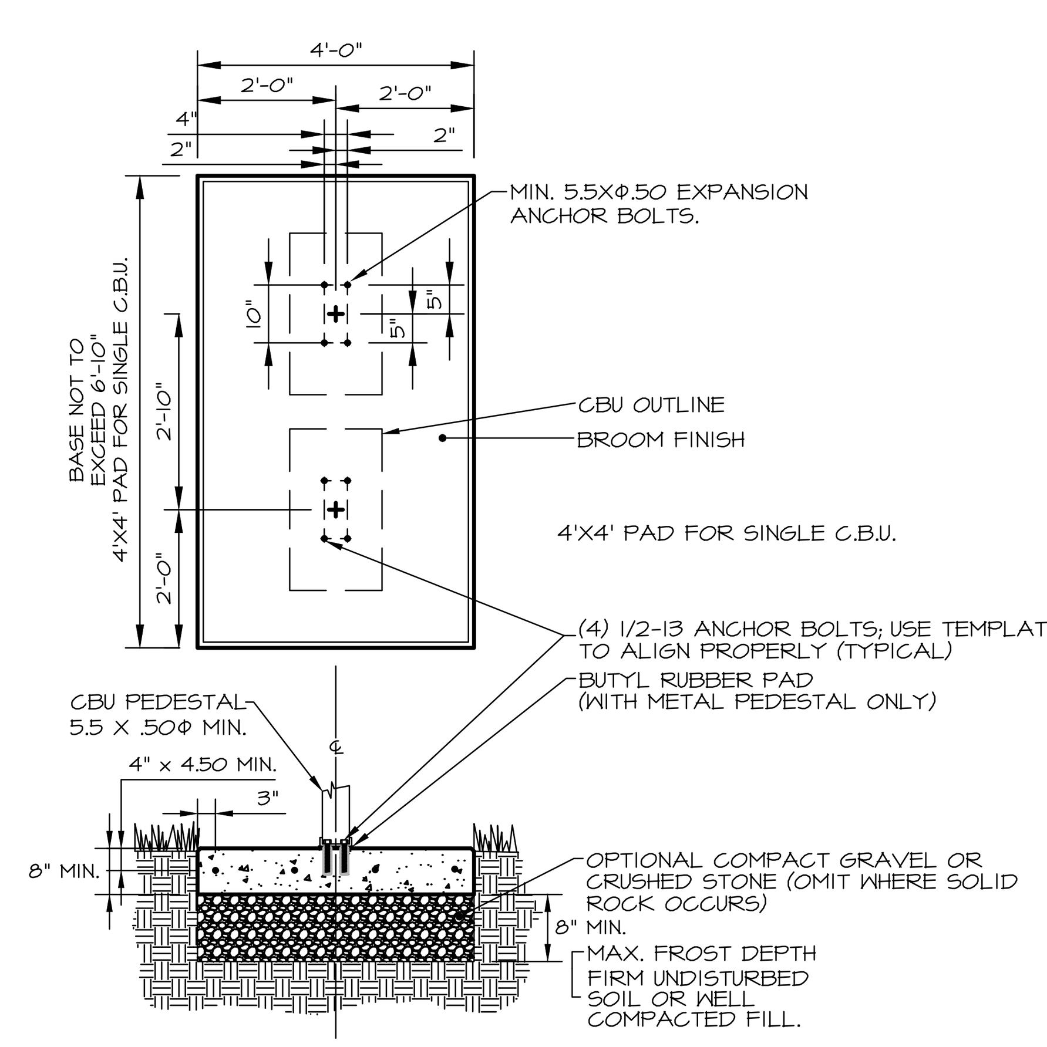


SANITARY & SUMP SERVICES SHALL BE MARKED AT THE END OF PIPE WITH A 2X4 TO THE SURFACE & A STEEL FENCE POST. PLACE ONE 6 FT. STEEL POST BURIED 3 FT. AT WATER CURB BOX. COLOR MARKING OF SERVICES SHALL BE RED FOR SANITARY, GREEN FOR SUMPS AND BLUE FOR WATER.

SERVICE LOCATION DETAIL

NO SCALE



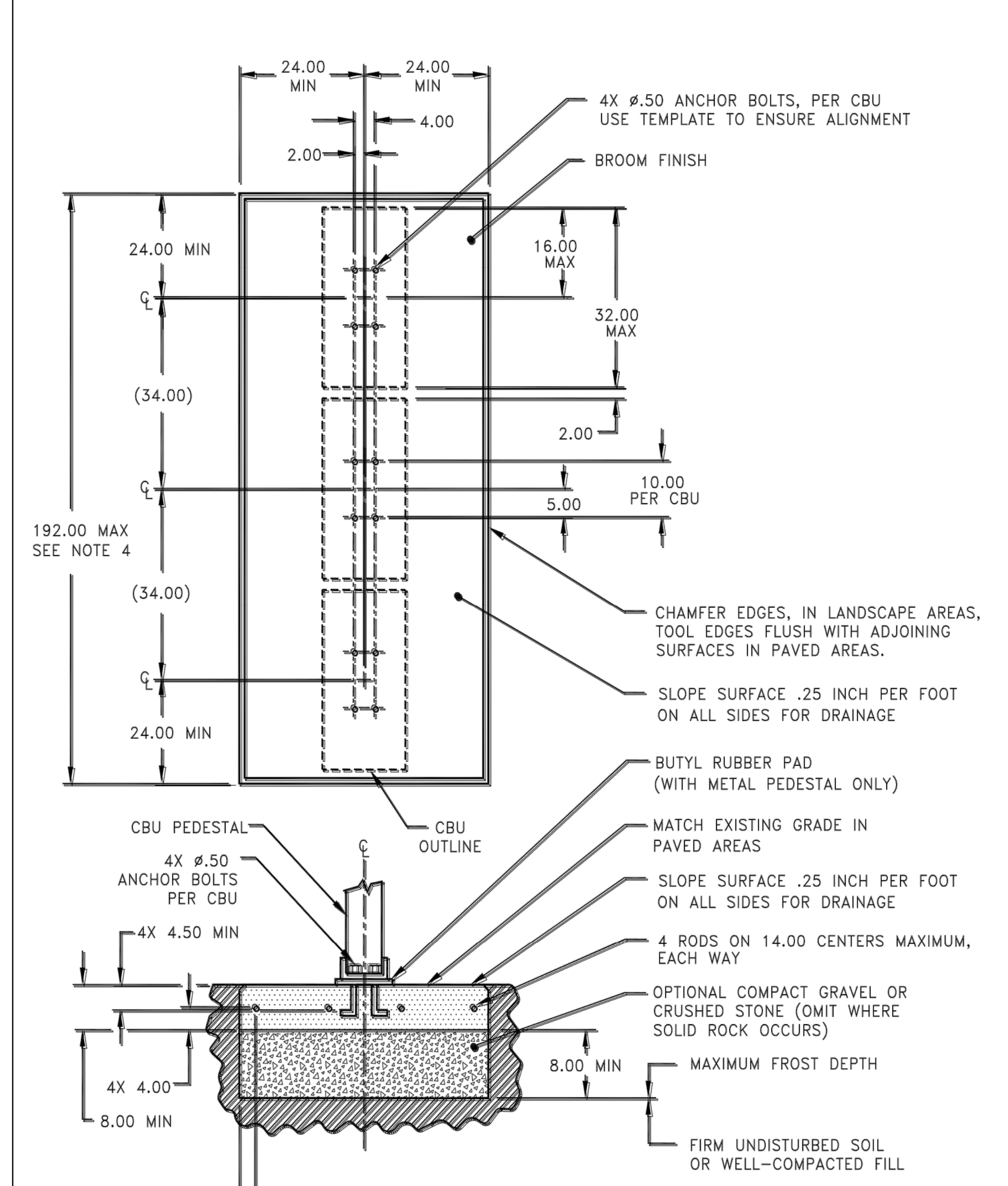


NOTES:
1) EXPANSION BOLTS SHALL BE EQUIVALENT TO THE FOLLOWING PROVIDERS:
   a. HILTI KWIK BOLT (www.us.hilti.com) 11-1/2" DIAMETER x 5-1/2" OVERALL LENGTH GALVANIZED, CATALOG #: 000-4353-696 KB II 12-512, STAINLESS STEEL; CATALOG #: 000-454-744 ENDURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 3-1/2"
   a. ITW RAMSET REDHEAD TRUBOLT (www.ramset-redhead.com) GALVANIZED, 1/2" DIAMETER x 7" OVERALL LENGTH; CATALOG NUMBER: WS-1270G ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 4-1/8".
   b. RAWL STUD (www.rawl.com) GALVANIZED, 1/2" DIAMETER x 5-1/2" OVERALL LENGTH; CATALOG NUMBER: 7724 ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 4".
3) TOP OF PAD SHALL MATCH FUTURE SIDEWALK ELEVATION W/ MAXIMUM CROSS SLOPE OF 2% TOWARDS STREET.
4) ALL C.B.U. SHALL FACE EITHER SOUTH OR EAST TO MINIMIZE FREEZING.

CONCRETE MAILBOX PAD - MULTI-UNIT DETAIL

NOT TO SCALE

USPS APPROVED SPECIFICATIONS – CONCRETE PAD (MULTIPLE UNIT)



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 – 4.50 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 B8M, TYPE 316 STAINLESS STEEL.
4. A 3 CBU CONFIGURATION IS DEPICTED. A 2 OR 4 CBU CONFIGURATION MAY BE USED AS LONG AS THEY ARE ARRANGED IN GROUPS SUCH THAT THE OVERALL DIMENSION OF THE CONCRETE BASE DOES NOT EXCEED 192 INCHES.

16

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PUBLISH DATE: September 8, 2021

DATE OF SURVEY:	JUNE 16, 2020
DESIGNED BY:	PC
DRAWN BY:	AJR

PRELIMINARY

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

SITE PLAN NOTES & INFORMATION

SHEET 02 OF 12

E-8663

CONCRETE FLUME DETAIL
NO SCALE

PRELIMINARY

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PUBLISH DATE: September 6, 2021
DATE OF SURVEY: JUNE 16, 2020 PC
DESIGNED BY: MEH
DRAWN BY:

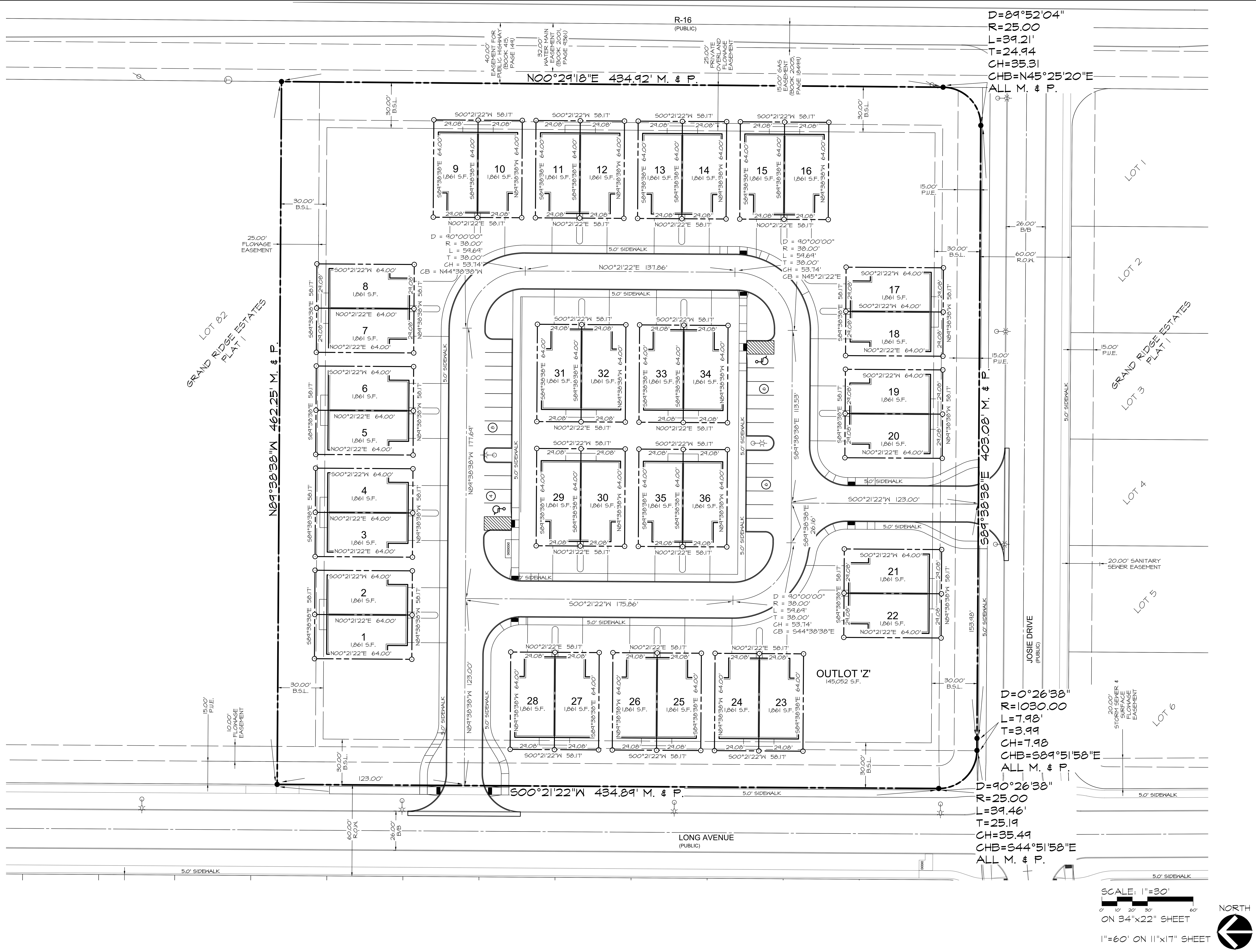
GRAND RIDGE ESTATES TOWNHOMES
2915 LONG AVENUE, VAN METER, IOWA

SITE PLAN DETAIL SHEET

SHEET 03 OF 12

E-8663

PLOT BY: - AUSTIN ROEPER - 2021/09/08 - Q:\E-FILES\E-8000\E8663\PL_Cil d drawings\construction documents\Site Plan\E8663 SP DETAILS.dwg) - ANSI EXPAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (General Documentation).pc3



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PUBLISH DATE: September 8, 2021

DATE OF SURVEY:
DESIGNED BY: PC
DRAWN BY: MEH
JUNE 16, 2020

PRELIMINARY

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

GEOMETRIC SHEET

SHEET 04 OF 12

E-8663

TYPICAL FOOTPRINT

SCALE: 1"=10'

0' 2' 4' 6' 8' 10' 20'

R-16
(PUBLIC)

40.00' EASEMENT FOR PUBLIC HIGHWAY (BOOK 415, PAGE 149)

32.00' WATER MAIN EASEMENT (BOOK 2001, PAGE 1861)

25.00' PRIVATE OVERLAND FLOWAGE EASEMENT

150.00' GAS EASEMENT (BOOK 2005, PAGE 8444)

LOT 82
GRAND RIDGE ESTATES
PLAT 1

LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
GRAND RIDGE ESTATES
PLAT 1

OUTLOT 'Z'
145,052 S.F.
3.33 AC.

LONG AVENUE
(PUBLIC)

JOSIE DRIVE
(PUBLIC)

SCALE: 1"=30'

0' 10' 20' 30' 60'

ON 34"x22" SHEET

1"=60' ON 11"x17" SHEET

NORTH

PRELIMINARY

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

DIMENSION PLAN

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PUBLISH DATE: September 6, 2021

DATE OF SURVEY: JUNE 16, 2020 PC

DESIGNED BY: MEH

DRAWN BY:

SHEET 01 OF 12

E-8663

PLOT BY: AUSTIN ROEMER - 2021/09/08 - q:\E-FILES\E-8000\E8663_Cad drawing\construction documents\Site Plan\E8663 SP - DIMENSION.dwg) - ANSI EXPAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 - CEC-ANSI TEST.CTB - PLOT SCALE = 1.0

R-16
(PUBLIC)

40.00' EASEMENT FOR PUBLIC HIGHWAY (BOOK 415, PAGE 149)

32.00' WATER MAIN EASEMENT (BOOK 2001, PAGE 1361)

25.00' PRIVATE OVERLAND FLOWAGE EASEMENT

15.00' L&S EASEMENT (BOOK 2005, PAGE 16449)

30.00' B.S.L.

10.00' CONCRETE FLUME

25.00' FLOWAGE EASEMENT

48" SW-301
RIM = 999.71
N=552464.88
E=1518352.56
OUT W FE = 988.79
IN S FE = 989.04

48" SW-301
RIM = 1003.15
N=552264.22
E=1518350.43
OUT N FE = 991.64
OUT W FE = 991.65

15.00' P.U.E.

25.00' PRIVATE OVERLAND FLOWAGE EASEMENT

26.00' B/B

60.00' R.O.W.

OVERFLOW SIDEWALK

201 L.F. 8-INCH SANITARY SEWER @ 1.30%

CRITICAL CROSSING
N: 552278.6635
E: 1518350.7322

CRITICAL CROSSING
N: 552270.0718
E: 1518224.0784

202 L.F. 8-INCH SANITARY SEWER @ 2.00%

TRIPLE CBU

CRITICAL CROSSING
N: 552465.8096
E: 1518143.6062

207 L.F. 8-INCH SANITARY SEWER @ 0.75%

OUTLOT 'Z'
145,052 S.F.
3.33 AC.

121 L.F. 8-INCH SANITARY SEWER @ 0.45%

30.00' PUBLIC SANITARY SEWER EASEMENT

17.00' PUBLIC SANITARY SEWER EASEMENT

6.00' CONCRETE FLUME

OVERFLOW SIDEWALK

48" SW-301
RIM = 995.41
N=552477.81
E=1518143.30
OUT W FE = 985.54
IN E FE = 985.64
IN S FE = 985.79

48" SW-301
RIM = 993.40
N=552210.58
E=1518148.67
IN E FE = 987.60
OUT N FE = 987.35

48" SW-301
RIM = 993.52
N=552418.56
E=1518021.42
OUT W FE = 984.23
IN N FE = 984.48

60 L.F. 8-INCH SANITARY SEWER @ 0.45%

48" SW-301
RIM = 992.94
N=552478.56
E=1518022.26
OUT S FE = 984.75
IN E FE = 985.00

48" SW-301
RIM = 993.41
N=552418.95
E=1517957.93
IN S FE = 982.80
OUT N FE = 982.70
IN E FE = 982.95

LONG AVENUE
(PUBLIC)

JOSIE DRIVE
(PUBLIC)

20.00' STORM SEWER & OVERLAND FLOWAGE EASEMENT

20.00' SANITARY SEWER EASEMENT

5.0' SIDEWALK

31.00' B/B

LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6

GRAND RIDGE ESTATES PLAT 1

LOT 82
GRAND RIDGE ESTATES PLAT 1

SCALE: 1"=30'
0' 10' 20' 30' 60'
ON 34"x22" SHEET
1"=60' ON 11"x17" SHEET

NORTH

PRELIMINARY

GRAND RIDGE ESTATES TOWNHOMES
2915 LONG AVENUE, VAN METER, IOWA

SANITARY SEWER PLAN

SHEET 06 OF 12

E-8663

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DESIGNED BY: MEH
DRAWN BY:

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PLOT BY: AUSTIN ROEMER - 2021/09/08 - Q:\E-FILES\E-8600\E8663_C3d drawing\construction documents\Site Plan\E8663.SP - UTILITY SANITARY.dwg) - ANSI EXPAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 - CEC-ANSI TEST.CTB - PLOT SCALE = 1:1

PLOT BY: AUSTIN ROEHRER - 2021/09/09 - Q:\E-FILES\E-8000\E8663_Cad drawings\construction documents\Site Plan\E8663 SP - UTILITY STORM.dwg) - ANSI EXPAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 - CEC-XES TEST.CTB - PLOT SCALE = 1:1

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PUBLISH DATE: September 8, 2021

DATE OF SURVEY:	JUNE 16, 2020	PC
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PRELIMINARY

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

STORM SEWER PLAN

SHEET 07 OF 12

E-8663

SCALE: 1"=30'
0' 10' 20' 30' 60'
ON 34"x22" SHEET
1"=60' ON 11"x17" SHEET

NORTH

R-16 (PUBLIC)

66 L.F. 24-INCH RCP CLASS III @ 0.00%

40.00' EASEMENT FOR INGRESS/EGRESS (BOOK 405 PAGE 149)

32.00' WATER MAIN EASEMENT (BOOK 2007 PAGE 9361)

25.00' PRIVATE OVERLAND FLOWAGE EASEMENT

15.00' GAS EASEMENT (BOOK 2005 PAGE 18449)

30.00' B.S.L.

10.00' CONCRETE FLUME

25.00' FLOWAGE EASEMENT

LOT 82 GRAND RIDGE ESTATES PLAT 1

ST 706
24" x 36" SW-501
w/ SW-603, TYPE 'R' GRATE
GRATE = 999.86
Out W FE = 995.17
In S FE = 995.64

ST 707
48" SW-401
w/ SW-602, TYPE 'E' CASTING
RIM = 1002.88
N=552308.44
E=1518336.51
Out N FE = 998.14

ST 713
18" SW-512
w/ SW-604, TYPE '4' GRATE
GRATE = 1003.50
Out W FE = 999.32

125 L.F. 8-INCH RCP CLASS III @ 2.00%

20.00' PUBLIC STORM SEWER EASEMENT

OVERFLOW SIDEWALK

ST 712
24" x 36" SW-501
w/ SW-603, TYPE 'R' GRATE
GRATE = 1001.41
In E FE = 997.61
Out W FE = 997.14

CRITICAL CROSSING
N: 552251.4652
E: 1518223.7420

ST 710
48" SW-401
w/ SW-602, TYPE 'F' CASTING
RIM = 1000.18
N=552251.66
E=1518194.07
In E FE = 995.90
Out W FE = 995.80
In S FE = 996.05

ST 711
24" x 36" SW-501
GRATE = 1001.51
Out N FE = 998.03

47 L.F. 15-INCH RCP CLASS III @ 4.25%

ST 705
24" x 36" SW-501
w/ SW-603, TYPE 'R' GRATE
GRATE = 996.84
Out W FE = 992.80
In E FE = 992.90

ST 704
48" SW-401
w/ SW-602, TYPE 'F' CASTING
RIM = 995.24
N=552465.84
E=1518131.22
Out W FE = 990.84
In E FE = 990.94
In S FE = 991.09

CRITICAL CROSSING
N: 552465.8046
E: 1518143.6062

106 L.F. 15-INCH RCP CLASS III @ 1.75%

TRIPLE CBU

20.00' PUBLIC STORM SEWER EASEMENT

ST 702
24" x 36" SW-501.
w/ SW-603, TYPE 'R' GRATE
GRATE = 993.15
N=552440.41
E=1518047.46
Out N FE = 989.41
In S FE = 989.51

EX. ST 206
24" FES
N=552591.48
E=1518035.98
Out W FE = 988.04

ST 701
18" FES
N=552591.73
E=1518047.12
In S FE = 989.20

20.00' PUBLIC STORM SEWER EASEMENT

84 L.F. 15-INCH RCP CLASS III @ 1.00%

157 L.F. 15-INCH RCP CLASS III @ 1.75%

ST 708
24" x 36" SW-501
w/ SW-603, TYPE 'R' GRATE
GRATE = 996.17
In S FE = 991.66
Out N FE = 991.56

47 L.F. 15-INCH RCP CLASS III @ 1.00%

24 L.F. 18-INCH RCP CLASS III @ 1.00%

ST 703
24" x 36" SW-501
w/ SW-603, TYPE 'R' GRATE
GRATE = 993.53
Out N FE = 989.75
In E FE = 990.00

EX. ST 209
15" FES
N=552368.94
E=1518033.37
Out W FE = 990.50

ST 709
48" SW-401
w/ SW-602, TYPE 'E' CASTING
RIM = 999.66
N=552261.13
E=1518129.45
In E FE = 994.66
Out N FE = 994.40

OUTLOT 'Z'
145,052 S.F.

JOSIE DRIVE (PUBLIC)

LONG AVENUE (PUBLIC)

41 L.F. 18-INCH RCP CLASS III @ 0.50%

CRITICAL CROSSING
N: 552496.2662
E: 1518047.4126

CRITICAL CROSSING
N: 552478.4077
E: 1518047.3858

286 L.F. 30-INCH RCP CLASS III @ 0.48%

228 L.F. 18-INCH RCP CLASS III @ 0.60%

160 L.F. 8-INCH RCP CLASS III @ 0.60%

28 L.F. 15-INCH RCP CLASS III @ 1.00%

80 L.F. 8-INCH RCP CLASS III @ 4.50%

355 L.F. 8-INCH SANITARY SEWER @ 4.50%

286 L.F. 15-INCH RCP CLASS III @ 3.50%

20.00' SANITARY SEWER EASEMENT

20.00' STORM SEWER & SANITARY SEWER FLOWAGE EASEMENT

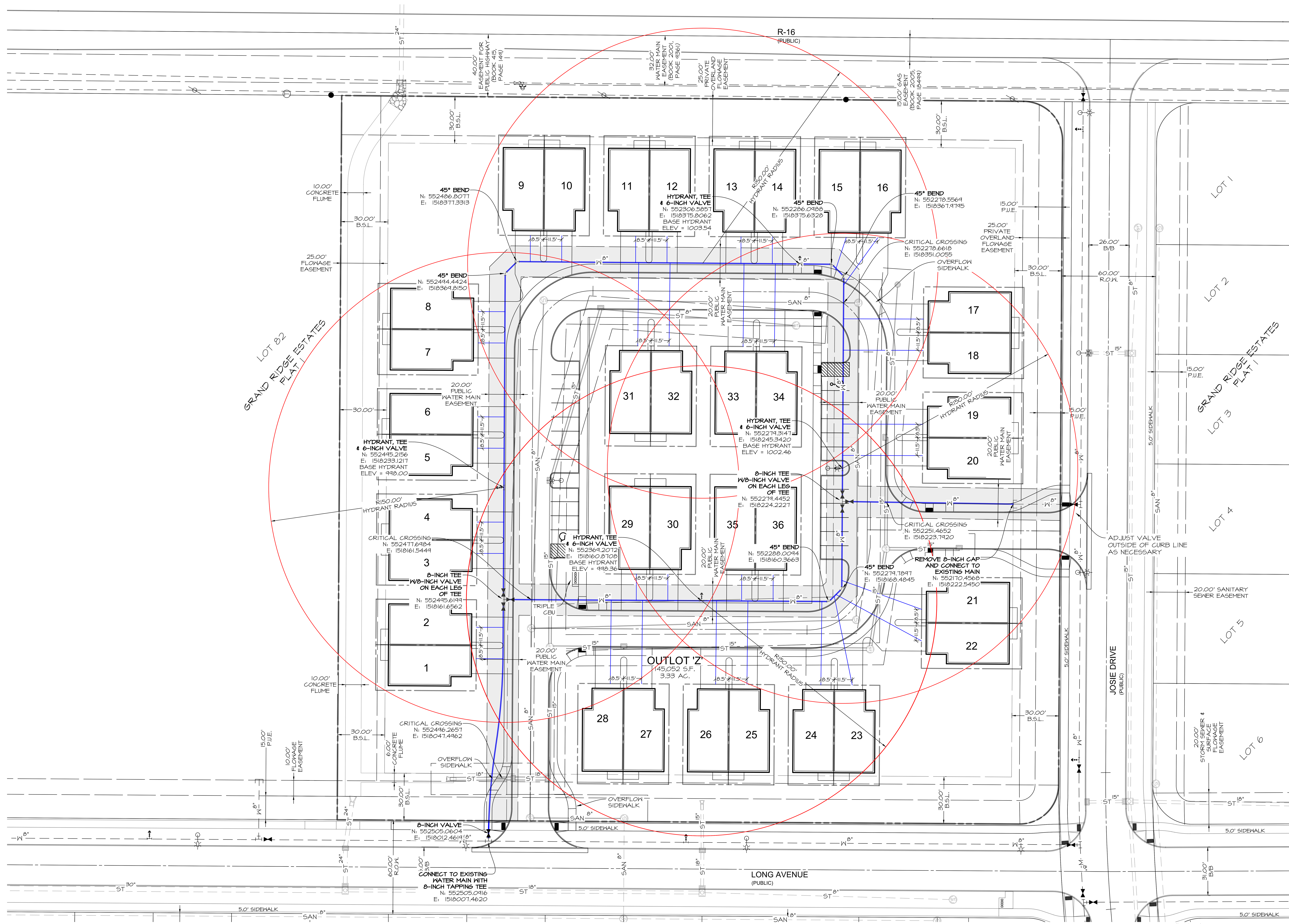
131 L.F. 18-INCH RCP CLASS III @ 0.60%

LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6

GRAND RIDGE ESTATES PLAT 1

5.0' SIDEWALK

26.00' B/B
60.00' R.O.W.
15.00' P.U.E.
5.00' P.U.E.
30.00' B.S.L.



SCALE: 1"=30'

ON 34"x22" SHEET

1"=60' ON 11"x17" SHEET

NORTH

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DESIGNED BY: PC

DRAWN BY: MEH

PRELIMINARY

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

WATER MAIN PLAN

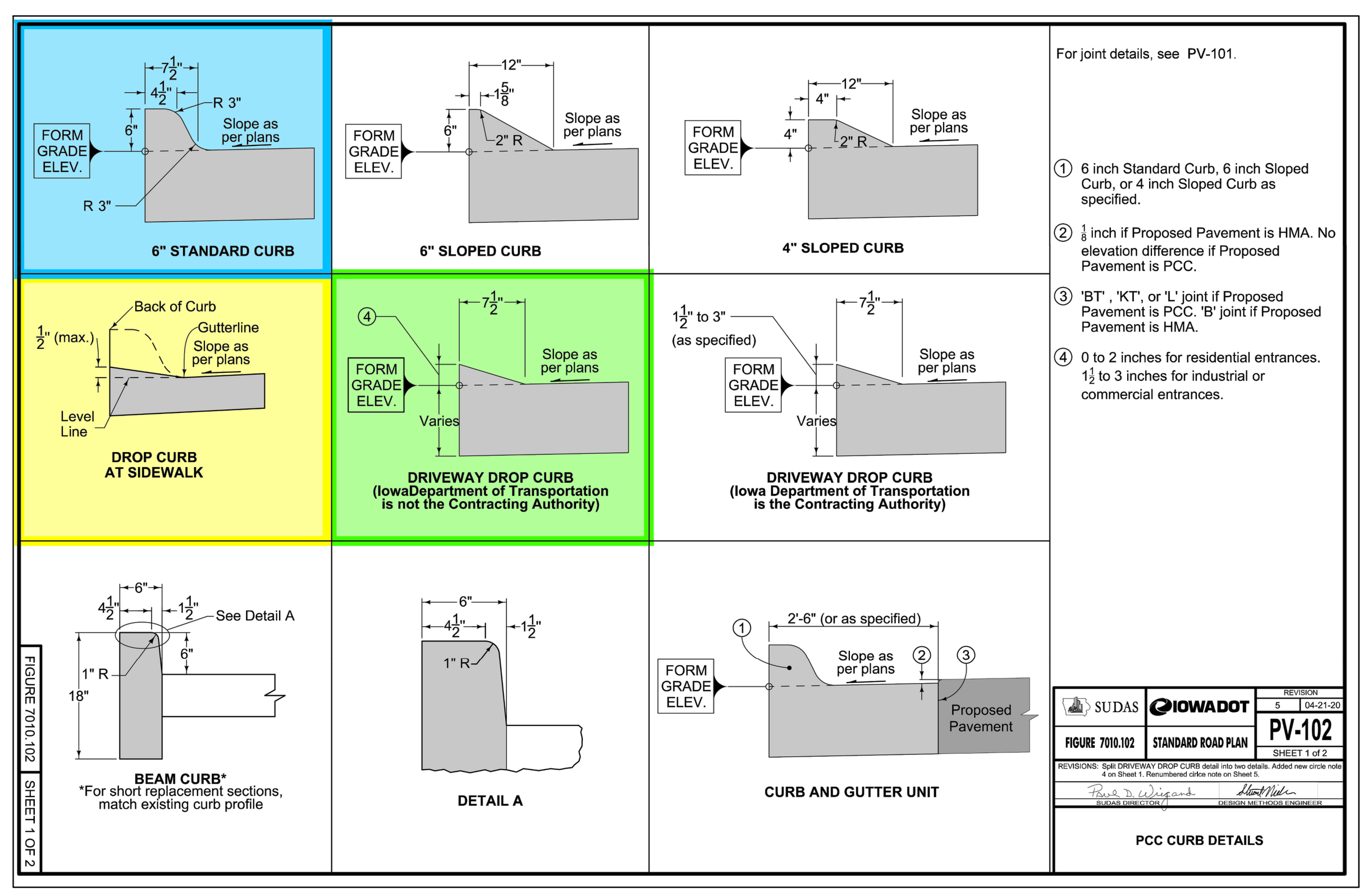
SHEET 08 OF 12

E-8663

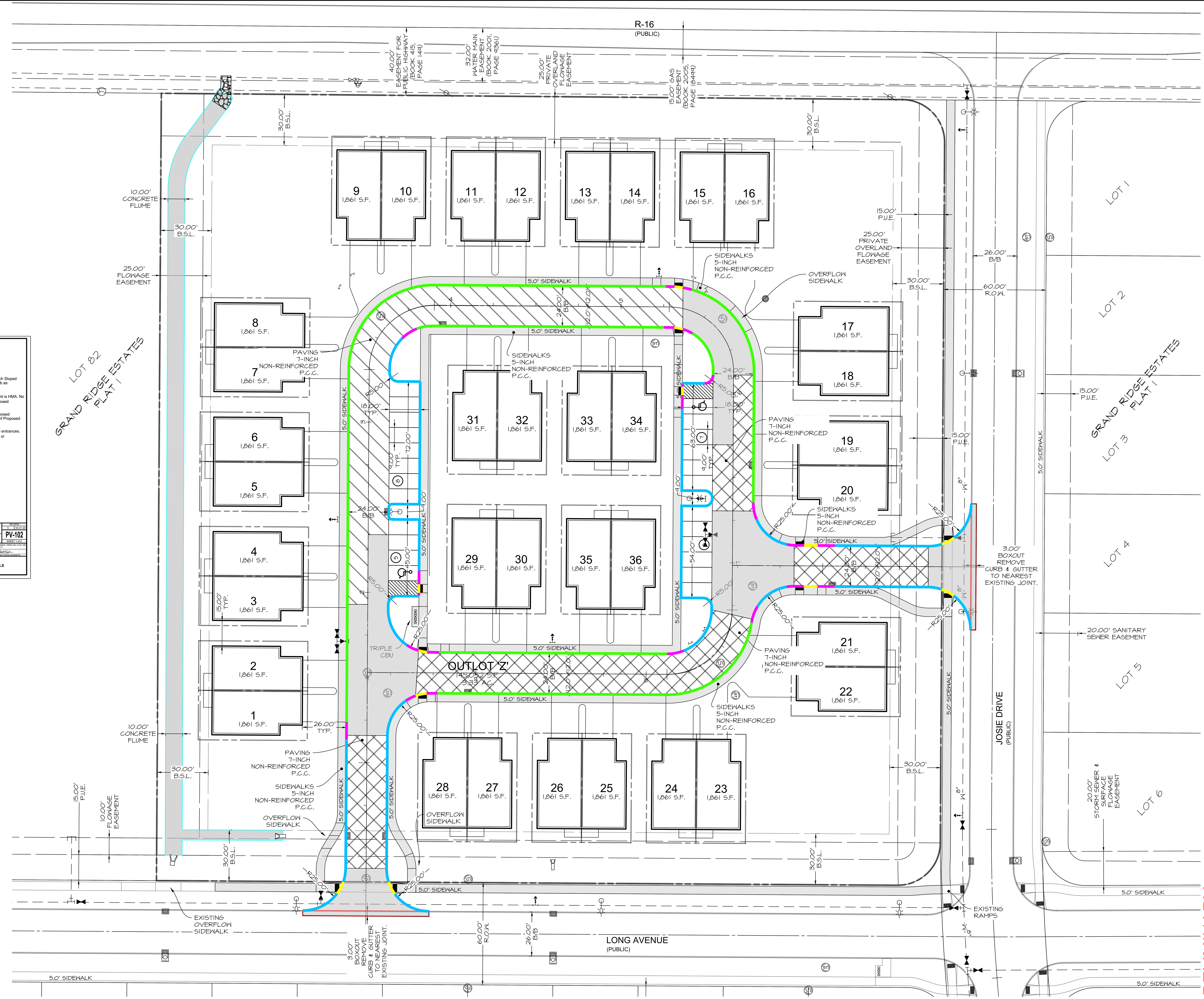
PLOT BY : AUSTIN ROEHER - 2021/09/08

PLOT BY : AUSTIN ROEHER - 2021/09/08

- TRANSITION (10' LENGTH)
- REDUCED CURB
- DROP CURB
- FULL CURB



- TRANSITION
- SLOPED TO THE RIGHT
- SLOPED TO THE LEFT



SCALE: 1"=30'

ON 34"x22" SHEET

1"=60' ON 11"x17" SHEET

NORTH

PRELIMINARY

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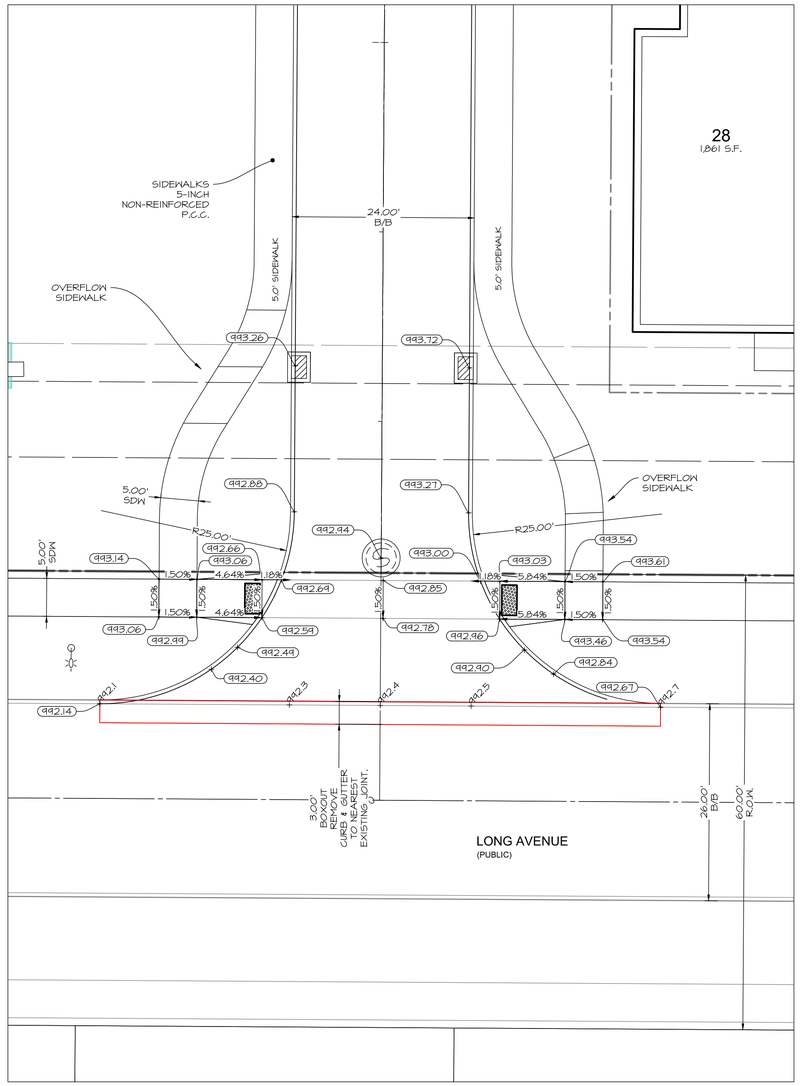
GRAND RIDGE ESTATES TOWNHOMES

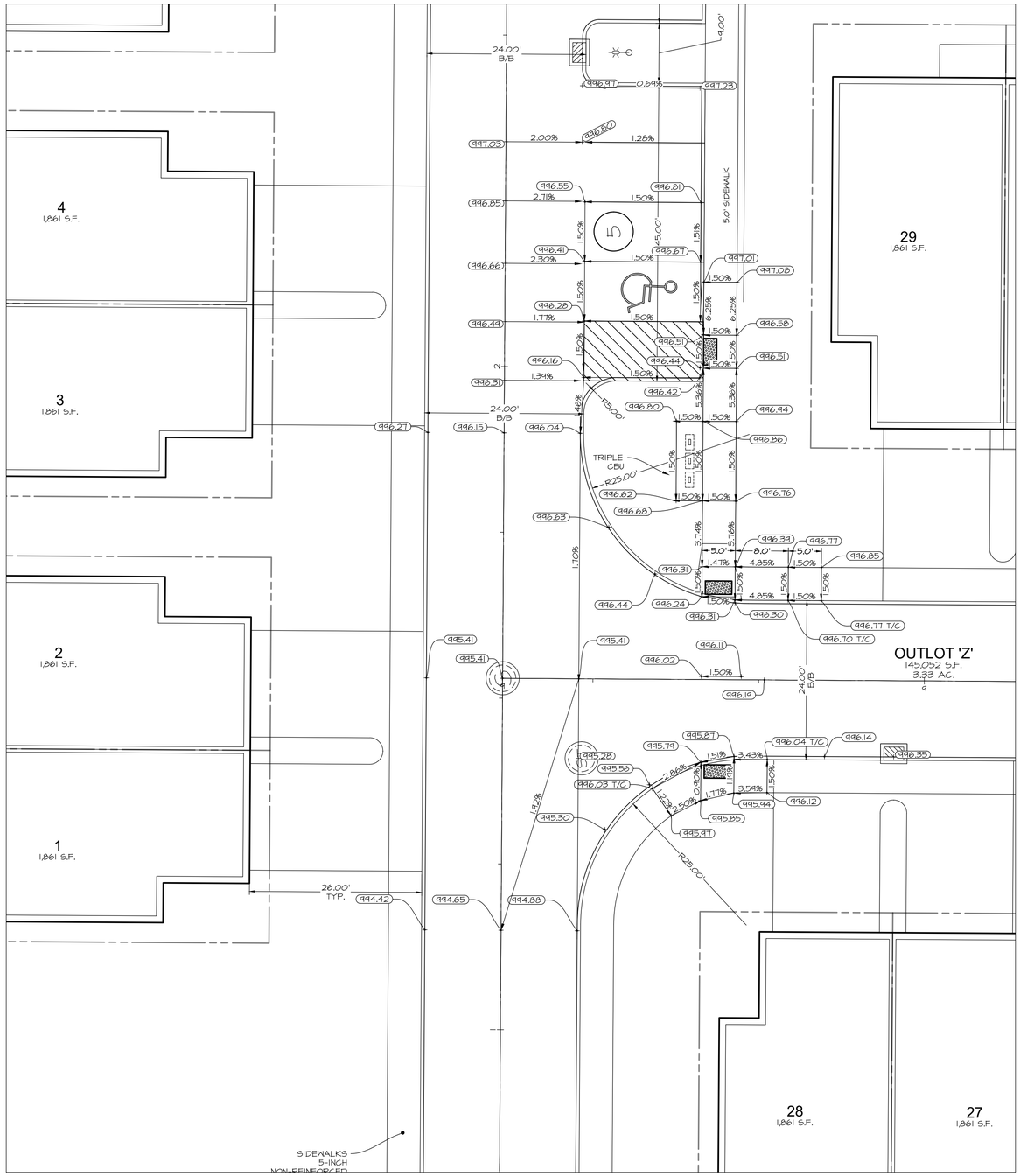
2915 LONG AVENUE, VAN METER, IOWA

PAVING PLAN

SHEET 09 OF 12

E-8663





PROWAG RAMP NOTES:

1. RAMP SLOPES:
   - 6.25% TARGET
   - 8.33% MAX (ASBUILT)
2. CROSS SLOPE:
   - 1.5% TARGET
   - 2.0% MAX (ASBUILT)

SCALE: 1"=10'
0' 2' 4' 6' 8' 10' 20'
ON 34"x22" SHEET
1"=20' ON 11"x17" SHEET

NORTH

PRELIMINARY

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

PAVING DETAIL

SHEET 10 OF 12

E-8663

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PLOT BY: AUSTIN ROEMER - 2021/09/08 - q:\E-FILES\E-8000\E8663_Cad drawing\construction documents\Site Plan\E8663 SP - PAVING DETAIL.dwg 1 - ANSI EXPAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 - CEC-XES TEST.CTB - PLOT SCALE = 1:1

PLOT BY: AUSTIN ROBERE - 2020/09/09 - Q:\E-FILES\E-BOOKS\E8663_Cad drawings\construction documents\Site Plan\E8663 SP - PAVING DETAIL.dwg) - ANSI EXPAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 - CEC-XES TEST.CTB - PLOT SCALE = 1.1

13
1,861 S.F.

14
1,861 S.F.

15
1,861 S.F.

16
1,861 S.F.

17
1,861 S.F.

18
1,861 S.F.

2
S.F.

33
1,861 S.F.

34
1,861 S.F.

20
1,861 S.F.

21
1,861 S.F.

36
1,861 S.F.

5.0' SIDEWALK

24.00' B/B

12.0'

SIDEWALKS 5-INCH NON-REINFORCED P.C.C.

PAVING 7-INCH NON-REINFORCED P.C.C.

R25.00'

18.00' TYP.

26.00' B/B

60.00' R.O.W.

3.00' BOXOUT REMOVE CURB & GUTTER TO NEAREST EXISTING JOINT.

JOSIE DRIVE (PUBLIC)

PROWAG RAMP NOTES:

1. RAMP SLOPES:
   - 6.25% TARGET
   - 8.33% MAX (ASBUILT)
2. CROSS SLOPE:
   - 1.5% TARGET
   - 2.0% MAX (ASBUILT)

SCALE: 1"=10'

0' 2' 4' 6' 8' 10' 20'

ON 34"x22" SHEET

1"=20' ON 11"x17" SHEET

NORTH

PRELIMINARY

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

PAVING DETAIL

CEC
Civil Engineering Consultants, Inc.
2400 86th Street, Unit 12 . Des Moines, Iowa 50322
515.276.4884 . Fax: 515.276.7084 . mail@ceclac.com

PUBLISH DATE: September 8, 2021

DATE OF SURVEY: JUNE 16, 2020 PC

DESIGNED BY: MEH

DRAWN BY:

SHEET — OF 12

E-8663

R-16
(PUBLIC)

LONG AVENUE
(PUBLIC)

JOSIE DRIVE
(PUBLIC)

OUTLOT 'Z'
145,052 S.F.
3.33 AC.

TRIPLE CBU

EXISTING OVERFLOW SIDEWALK

EXISTING RAMPS

LOT 82
GRAND RIDGE ESTATES
PLAT 1

LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6

SCALE: 1"=30'
0' 10' 20' 30' 60'
ON 34"x22" SHEET
1"=60' ON 11"x17" SHEET

NORTH

PRELIMINARY

CEC
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2400 86th Street, Unit 12 . Des Moines, Iowa 50322
515.276.4884 . Fax: 515.276.7084 . mail@ceclac.com

PUBLISH DATE: September 8, 2021

DATE OF SURVEY:	JUNE 16, 2020	
DESIGNED BY:		PC
DRAWN BY:		AJR

GRAND RIDGE ESTATES TOWNHOMES

2915 LONG AVENUE, VAN METER, IOWA

GRADING PLAN

SHEET 12 OF 12

E-8663

PLOT BY: AUSTIN ROEMER - 2021/09/08 - q:\E-FILES\E-8000\E8663_Cad drawings\construction documents\Site Plan\E8663 SP - GRADING.dwg [- ANSI EXPAND D (34.00 X 22.00 INCHES) - AUTOCAD PDF (GENERAL DOCUMENTATION).pc3 - CEC-XES TEST.CTB - PLOT SCALE = 1:1

STORMWATER MANAGEMENT REPORT

Project: Grand Estates Plat 1 Lot 83
Prepared By: Paul Clausen, P.E.
Austin Roemer, E.I.T.

CEC
Civil Engineering Consultants, Inc.

Date: July 30, 2021
Revised:
Project No: E8663

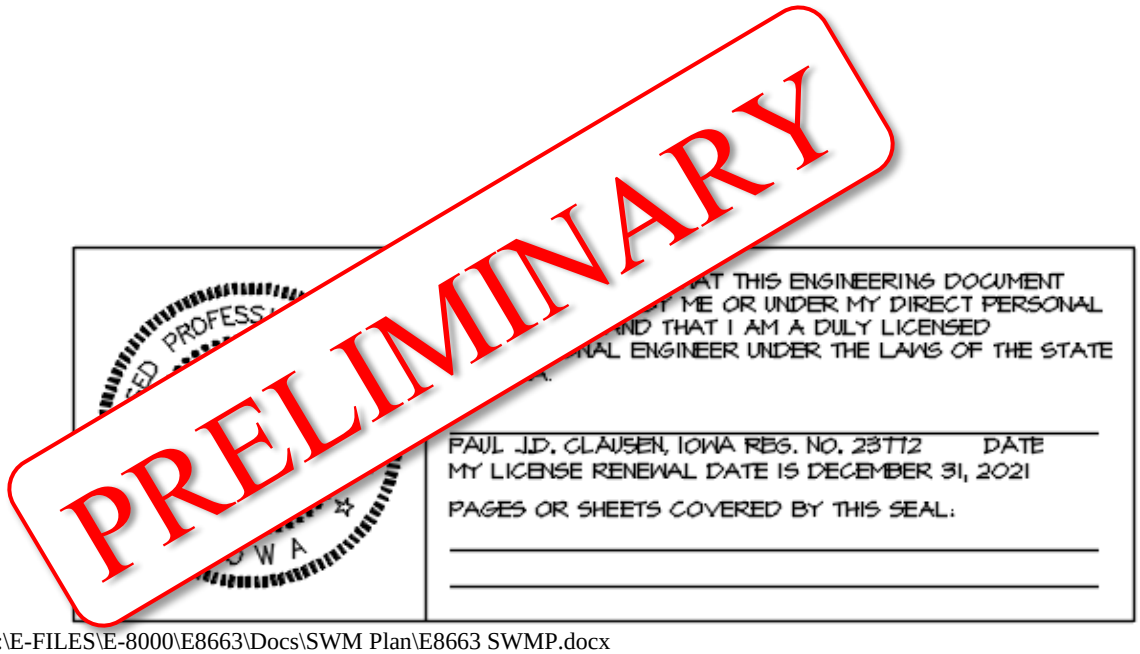


Table of Contents

1. Site Characteristics

a. Pre-developed Conditions

Grand Estates Plat 1 Lot 83 is a 4.87 acre site located on the east side of Grand Estates Plat 1 in Van Meter, Iowa. The entire pre-developed site drains to the existing Grand Estates Plat 1 Wet Bottom Basin. The soils predominantly consist of Sharpsburg silty clay loam with slopes between 2% to 9%. The soils are classified as Hydrologic Soils Group C. Hydrologic soils group C soils have a low infiltration rate when thoroughly wet with a slow rate of water transmission. The USDA Hydrologic Soils Report may be found in the Appendix.

b. Post-development Conditions

The Grand Estates Plat 1 Lot 83 project will consist of the development of 36 townhouse lots. The proposed conditions are assumed to have soils classified as Hydrologic Soils Group C. Stormwater from the proposed development will be conveyed to the existing Grand Estates Plat 1 Wet Bottom Basin. Stormwater detention will also be provided by the Grand Estates Plat 1 Wet Bottom Basin.

c. Contributing Off-site Drainage

There is 6.65 acres of agricultural land which drains to the proposed site. This area will be routed through the North Swale to the existing Grand Estates Plat 1 Wet Bottom Basin and be treated as pass-thru.

d. Stormwater Detention

There will be no stormwater treatment on site. Stormwater detention is provided by the Grand Estates Plat 1 Wet Bottom Basin. The Grand Estates Plat 1 Wet Bottom Basin was sized to detain for the entire 4.87 acre of Grand Estates Plat 1 Lot 83 developed as a multi-family residential site, in addition to the entire 6.64 acre Offsite East area.

e. Floodways, Floodplains and Wetlands

See Appendix for the Wetlands map and FIRM Panel Number 19049C0340F, effective date December 7, 2018.

2. Stormwater Conveyance Design

1) Design Information References

i. The Rational Method was used to determine design flows. Manning's Equation was used to determine pipe capacities.
ii. Intakes were located to provide bypass flows below the maximum 50% bypass flow for the 5-year event. (See Figure 5.1 Storm Sewer Intake Calculations)
iii. Low point intakes were designed to intercept the 100-year storm event. Pipes downstream from low point intakes were designed to convey 100-year flows.
iv. Cleansing velocities within storm sewer pipes were calculated using ½ full pipes.

2) Storm Sewer

a. Intake Calculations

Storm Sewer Calculations for Grand Estates Plat 1 Lot 83

* LP or CG= intake is at a low point or continuous grade

LP=0 CG=1 FES=3

n = 0.016 Broom Finish Concrete (typical for most streets)

INTAKE CHART

A	B	D	E	F	G	H	I	J	K	L	M	N	O	O	P	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
DRAINAGE AREA IDENTIFIER	Area (ac)	I5 (in/hr)	I10 (in/hr)	I100 (in/hr)	c5	c10	c100	Q5 (cfs)	Q10 (cfs)	Q100 (cfs)	q5 + bypass	q10 + bypass	q100 + bypass	* CG LP	INT. Type SW-	Q_{i5} (cfs)	Q_{i10} (cfs)	Q_{i100} (cfs)	d5 ft	d10 ft	d100 (ft)	Qb5 (cfs)	Qb10 (cfs)	Qb100 (cfs)	%Capture 5Yr	%Capture 10Yr	%Capture 100Yr	Bypasses To Intake
EAST SWALE	0.23	4.12	4.82	7.44	0.55	0.60	0.70	0.52	0.67	1.20	0.52	0.67	1.20	3	FES	0.52	0.67	1.20	NA	NA	NA	0.00	0.00	0.00	100%	100%	100%	NA
SOUTH SWALE	0.11	4.12	4.82	7.44	0.55	0.60	0.70	0.25	0.32	0.57	0.25	0.32	0.57	3	FES	0.25	0.32	0.57	NA	NA	NA	0.00	0.00	0.00	100%	100%	100%	NA
ST 713	0.30	4.12	4.82	7.44	0.55	0.60	0.70	0.68	0.87	1.56	0.68	0.87	1.56	0	TYPE 4A 18	0.68	0.87	1.56	0.15	0.18	0.27	0.00	0.00	0.00	100%	100%	100%	LP
ST 712	0.25	4.12	4.82	7.44	0.55	0.60	0.70	0.57	0.72	1.30	0.57	0.72	1.30	1	501	0.49	0.60	0.92	0.10	0.11	0.13	0.08	0.12	0.38	86%	84%	71%	ST 708
ST 711	0.15	4.12	4.82	7.44	0.55	0.60	0.70	0.34	0.43	0.78	0.34	0.43	0.78	1	501	0.31	0.39	0.58	0.08	0.09	0.12	0.03	0.05	0.20	92%	89%	74%	ST 708
ST 708	0.64	4.12	4.82	7.44	0.55	0.60	0.70	1.45	1.85	3.33	1.55	2.02	3.92	1	501	1.22	1.58	2.77	0.13	0.13	0.13	0.33	0.43	1.15	78%	78%	71%	ST 702
ST 707	0.00	4.12	4.82	7.44	0.55	0.60	0.70	0.00	0.00	0.00	0.06	0.06	0.06	1	501	0.06	0.06	0.05	0.04	0.04	0.04	0.00	0.00	0.01	100%	100%	90%	MH
ST 706	0.43	4.12	4.82	7.44	0.55	0.60	0.70	0.97	1.24	2.24	0.97	1.24	2.24	1	501	0.78	0.98	1.58	0.13	0.13	0.13	0.20	0.27	0.66	80%	78%	71%	ST 705
ST 705	0.51	4.12	4.82	7.44	0.55	0.60	0.70	1.16	1.47	2.66	1.35	1.74	3.31	1	501	1.06	1.37	2.34	0.13	0.13	0.13	0.29	0.38	0.97	78%	78%	71%	ST 702
ST 703	0.04	4.12	4.82	7.44	0.55	0.60	0.70	0.09	0.12	0.21	0.09	0.12	0.21	1	501	0.09	0.11	0.18	0.05	0.06	0.07	0.00	0.00	0.03	99%	99%	86%	OFFSITE
ST 702	0.65	4.12	4.82	7.44	0.55	0.60	0.70	1.47	1.88	3.39	2.10	2.69	5.51	1	501	1.65	2.11	3.89	0.13	0.13	0.13	0.45	0.58	1.62	78%	78%	71%	OFFSITE

b. Pipe Calculations

PIPE CHART (All Minimum Pipe Slopes are based on using RCP)																
Structure	to	Structure	Cumm Q_5pipe cfs	Cumm Q_{10}pipe cfs	Cumm Q_{100}pipe cfs	DESIGN STORM	MINIMUM PIPE SIZE (INCHES) AND SLOPE (%)					Min 8"	PIPE DESIGN			
							24	21	18	15	12	8	PIPE SIZE (inches)	SLOPE (%)	PIPE CAPACITY (cfs)	1/2 FULL PIPE VELOCITY (FPS)
ST 713	to	ST 712	0.68	0.87	1.56	Q5pipe cfs	0.00%	0.00%	0.00%	0.01%	0.04%	0.15%	8	1.75%	2.48	6.61
ST 712	to	ST 710	1.17	1.47	2.48	Q5pipe cfs	0.00%	0.01%	0.01%	0.03%	0.11%	0.45%	15	1.75%	9.19	6.96
ST 711	to	ST 710	0.31	0.39	0.58	Q5pipe cfs	0.00%	0.00%	0.00%	0.00%	0.01%	0.03%	15	4.50%	14.74	11.17
ST 710	to	ST 709	1.48	1.86	3.06	Q5pipe cfs	0.00%	0.01%	0.02%	0.05%	0.17%	0.72%	15	2.50%	10.99	8.32
ST 709	to	ST 708	1.48	1.86	3.06	Q5pipe cfs	0.00%	0.01%	0.02%	0.05%	0.17%	0.72%	15	1.75%	9.19	6.96
ST 708	to	ST 704	2.70	3.44	5.83	Q5pipe cfs	0.01%	0.03%	0.07%	0.17%	0.57%	2.38%	15	1.00%	6.95	5.26
ST 707	to	ST 706	0.06	0.06	0.05	Q5pipe cfs	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15	2.00%	9.83	7.44
ST 706	to	ST 705	0.84	1.04	1.64	Q5pipe cfs	0.00%	0.00%	0.01%	0.02%	0.05%	0.23%	15	2.00%	9.83	7.44
ST 705	to	ST 704	1.90	2.40	3.98	Q5pipe cfs	0.01%	0.01%	0.03%	0.09%	0.28%	1.18%	15	1.75%	9.19	6.96
ST 704	to	ST 703	4.60	5.84	9.80	Q5pipe cfs	0.04%	0.08%	0.19%	0.50%	1.66%	6.91%	15	1.00%	6.95	5.26
ST 703	to	ST 702	4.69	5.96	9.98	Q5pipe cfs	0.04%	0.09%	0.20%	0.52%	1.72%	7.18%	18	1.00%	11.30	5.94
ST 702	to	ST 701	6.34	8.07	13.87	Q5pipe cfs	0.08%	0.16%	0.36%	0.96%	3.15%	13.11%	18	0.50%	7.99	4.20

c. Swale Calculations

Hydrograph Report

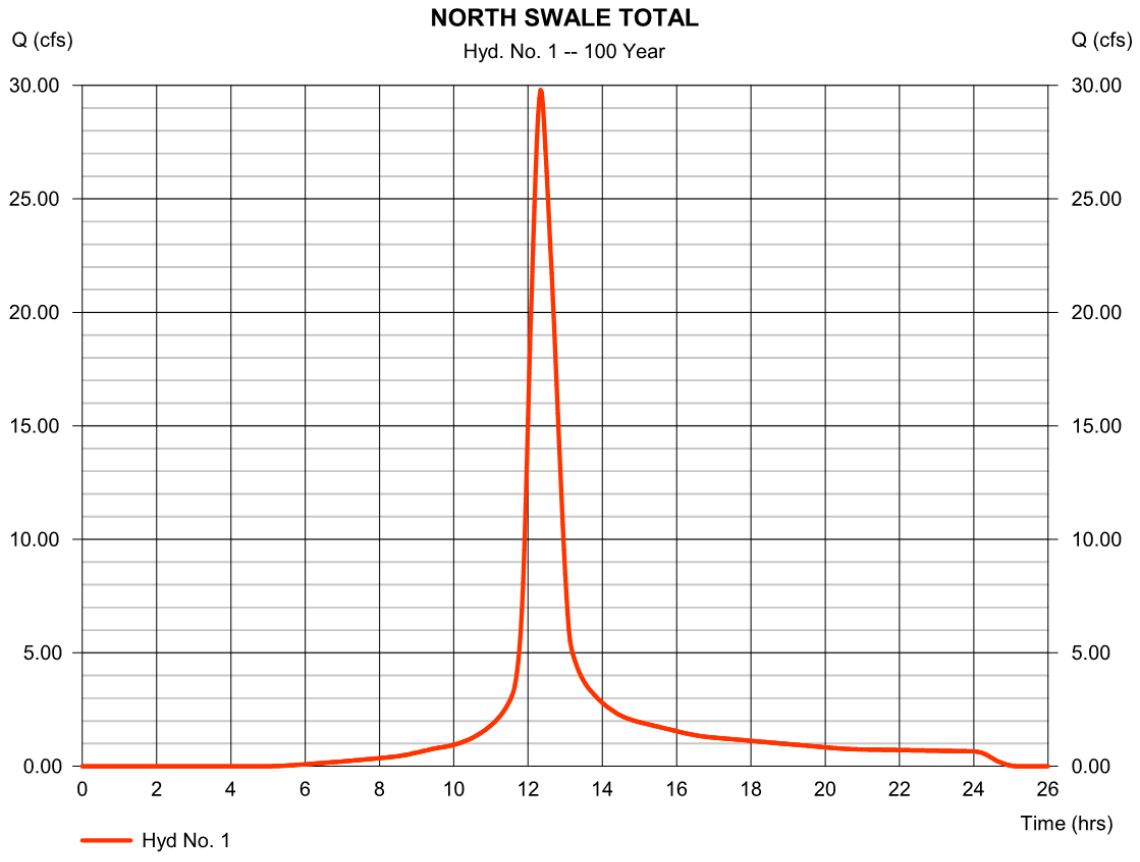
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 — Friday, 07 / 30 / 2021

Hyd. No. 1

NORTH SWALE TOTAL

Hydrograph type	= SCS Runoff	Peak discharge	= 29.80 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.33 hrs
Time interval	= 2 min	Hyd. volume	= 160,913 cuft
Drainage area	= 8.700 ac	Curve number	= 83*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 46.10 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(6.650 x 81) + (1.120 x 90) + (0.930 x 91)] / 8.700



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Wednesday, Jul 28 2021

NORTH SWALE

Trapezoidal

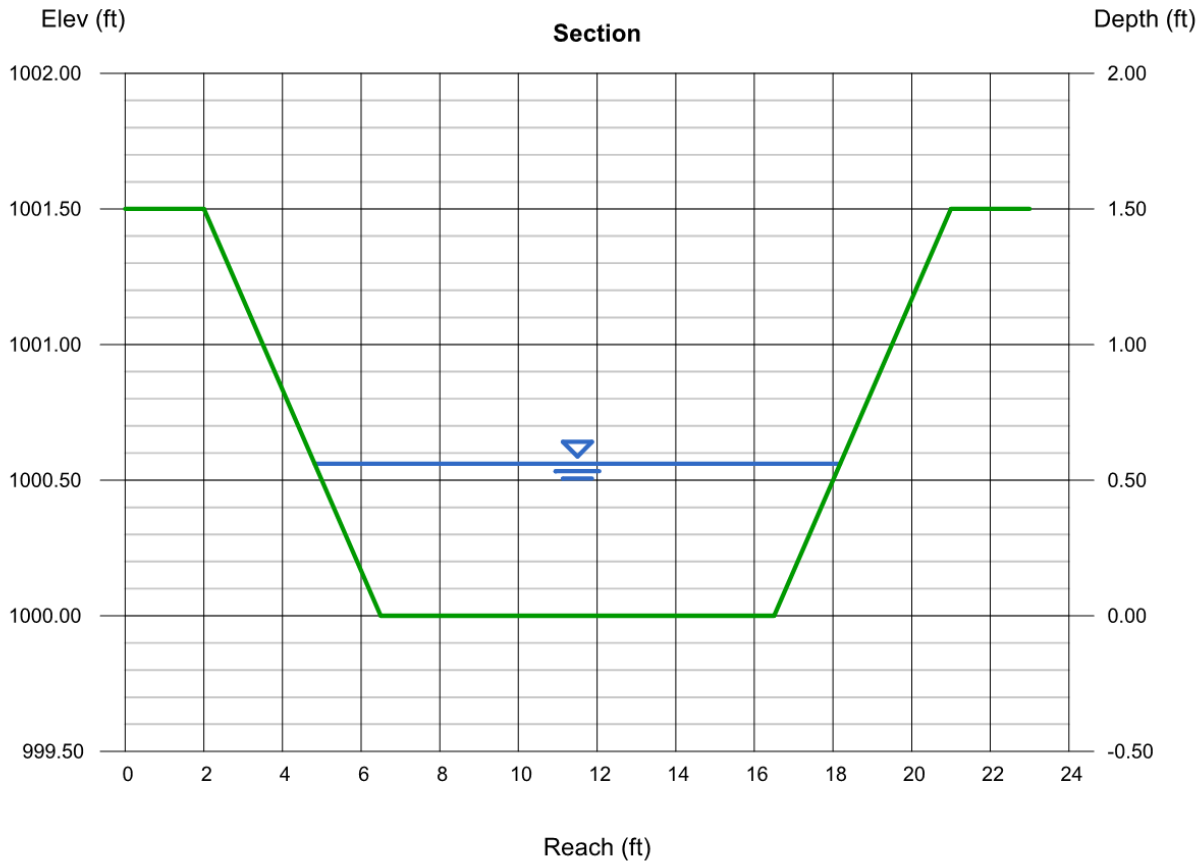
Bottom Width (ft)	= 10.00
Side Slopes (z:1)	= 3.00, 3.00
Total Depth (ft)	= 1.50
Invert Elev (ft)	= 1000.00
Slope (%)	= 2.25
N-Value	= 0.030

Calculations

Compute by:	Known Q
Known Q (cfs)	= 29.80

Highlighted

Depth (ft)	= 0.56
Q (cfs)	= 29.80
Area (sqft)	= 6.54
Velocity (ft/s)	= 4.56
Wetted Perim (ft)	= 13.54
Crit Depth, Yc (ft)	= 0.62
Top Width (ft)	= 13.36
EGL (ft)	= 0.88



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Jul 30 2021

EAST SWALE

Trapezoidal

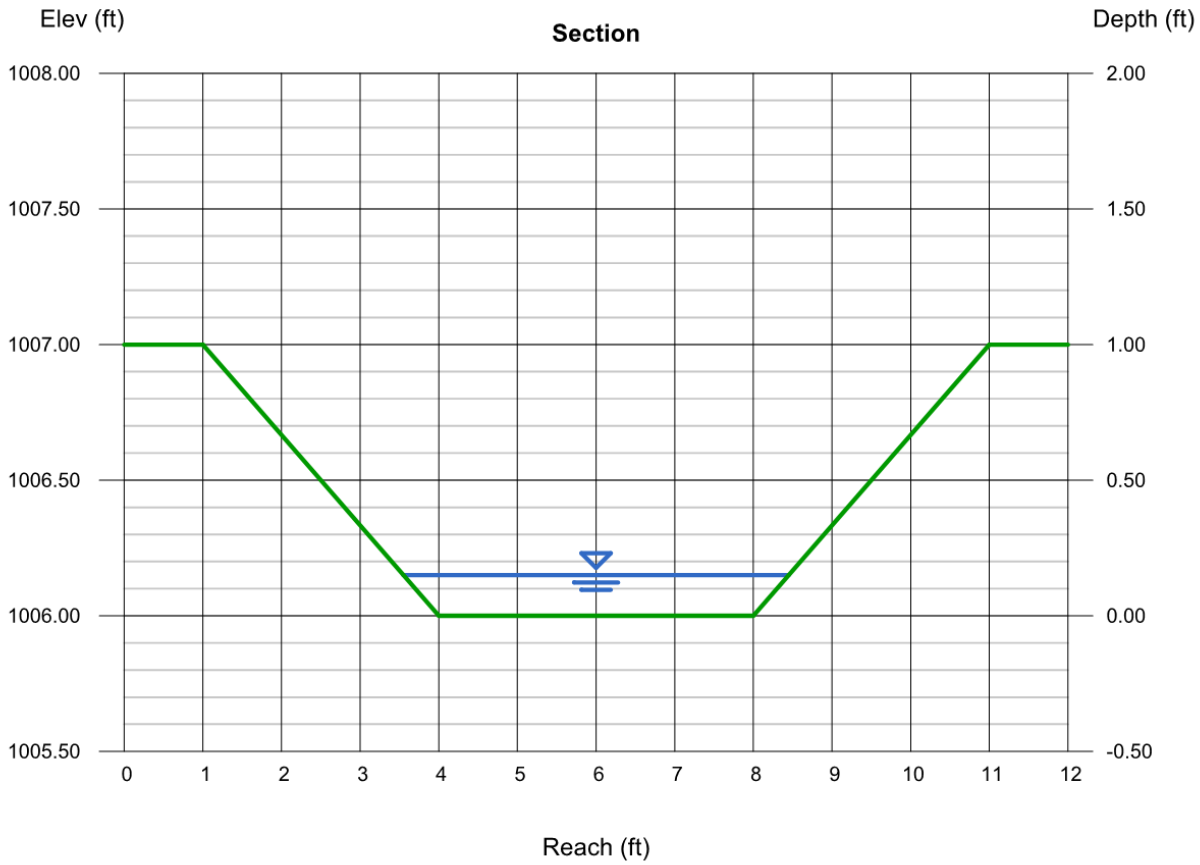
Bottom Width (ft)	= 4.00
Side Slopes (z:1)	= 3.00, 3.00
Total Depth (ft)	= 1.00
Invert Elev (ft)	= 1006.00
Slope (%)	= 2.00
N-Value	= 0.030

Calculations

Compute by:	Known Q
Known Q (cfs)	= 1.20

Highlighted

Depth (ft)	= 0.15
Q (cfs)	= 1.200
Area (sqft)	= 0.67
Velocity (ft/s)	= 1.80
Wetted Perim (ft)	= 4.95
Crit Depth, Yc (ft)	= 0.14
Top Width (ft)	= 4.90
EGL (ft)	= 0.20



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Jul 30 2021

SOUTH SWALE

Trapezoidal

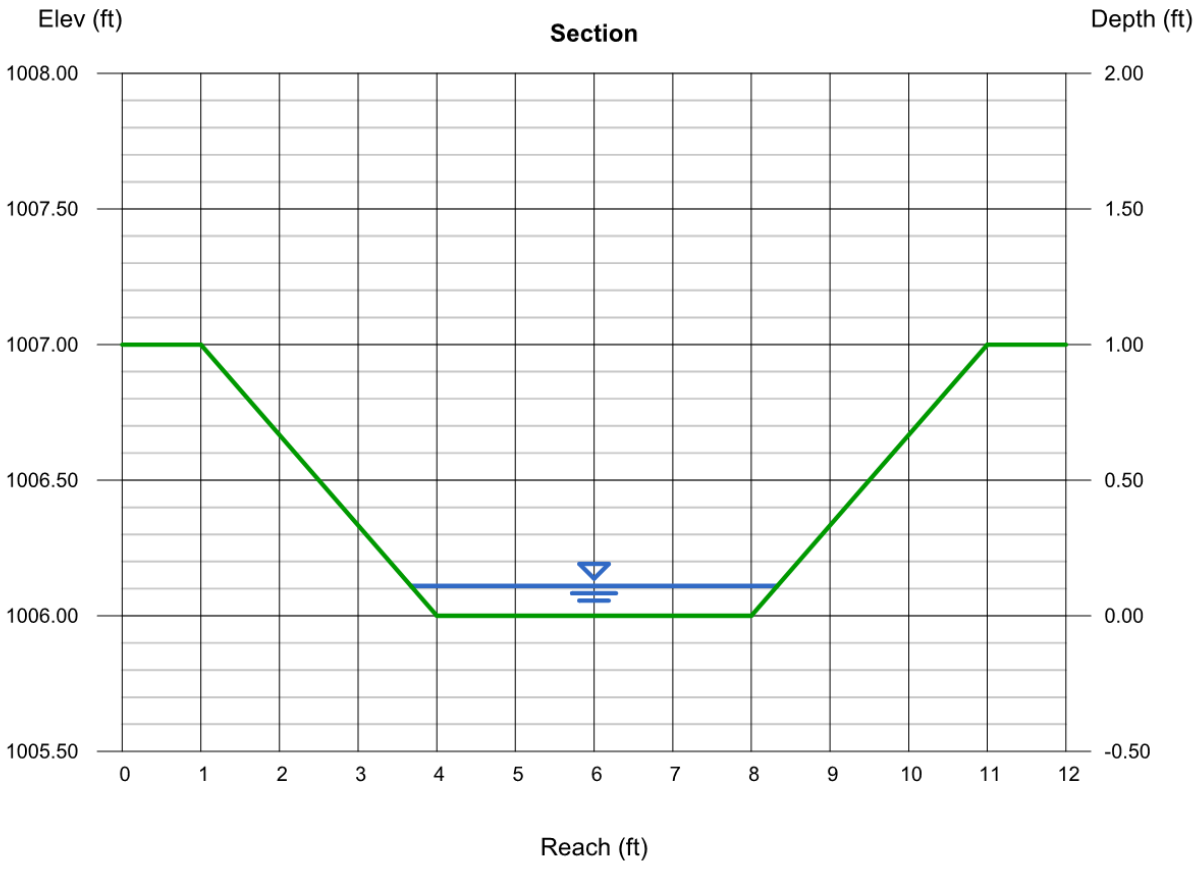
Bottom Width (ft)	= 4.00
Side Slopes (z:1)	= 3.00, 3.00
Total Depth (ft)	= 1.00
Invert Elev (ft)	= 1006.00
Slope (%)	= 1.50
N-Value	= 0.030

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.57

Highlighted

Depth (ft)	= 0.11
Q (cfs)	= 0.570
Area (sqft)	= 0.48
Velocity (ft/s)	= 1.20
Wetted Perim (ft)	= 4.70
Crit Depth, Yc (ft)	= 0.09
Top Width (ft)	= 4.66
EGL (ft)	= 0.13



3. Energy Dissipation Design

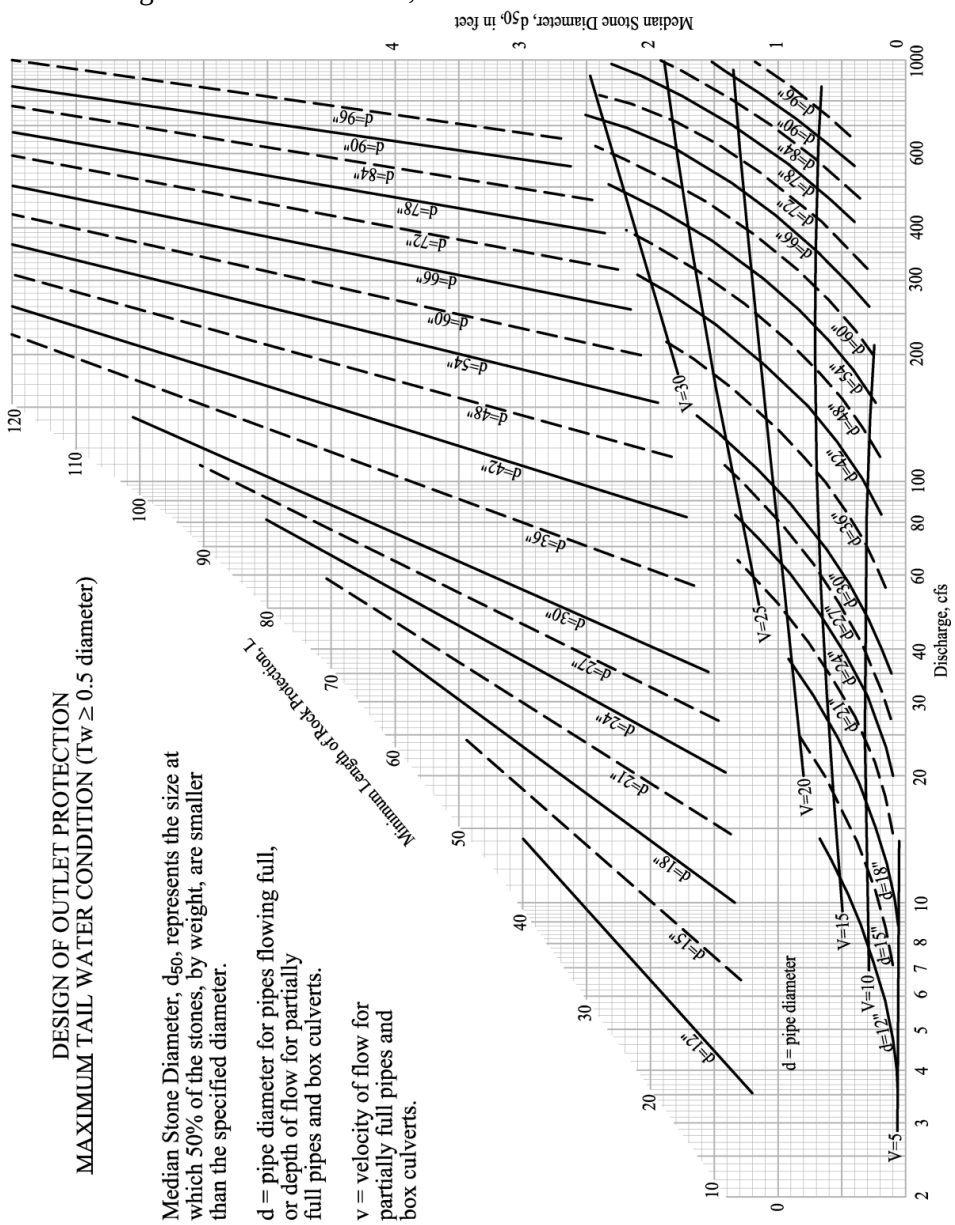
The soils predominantly consist of Sharpsburg silty clay loam with slopes between 2% to 9. The soils are classified as Hydrologic Soils Group C. Hydrologic soils group C soils have a low infiltration rate when thoroughly wet with a slow rate of water transmission. Flared end section discharging stormwater will have rip rap to dissipate the energy of the water flowing into adjacent waterways.

Existing FES from Offsite East:

Use 24" RCP @ 1.00%, Release Q_{100} = 21.87 cfs Pipe V_{100} = 7.0 ft/s

A 20' long x 18" deep apron (31 tons) of class 'E' riprap will be placed to prevent erosion. Refer to **Figure 7E-10.04:** Design of Outlet Protection, Maximum Tailwater Condition, see appendix.

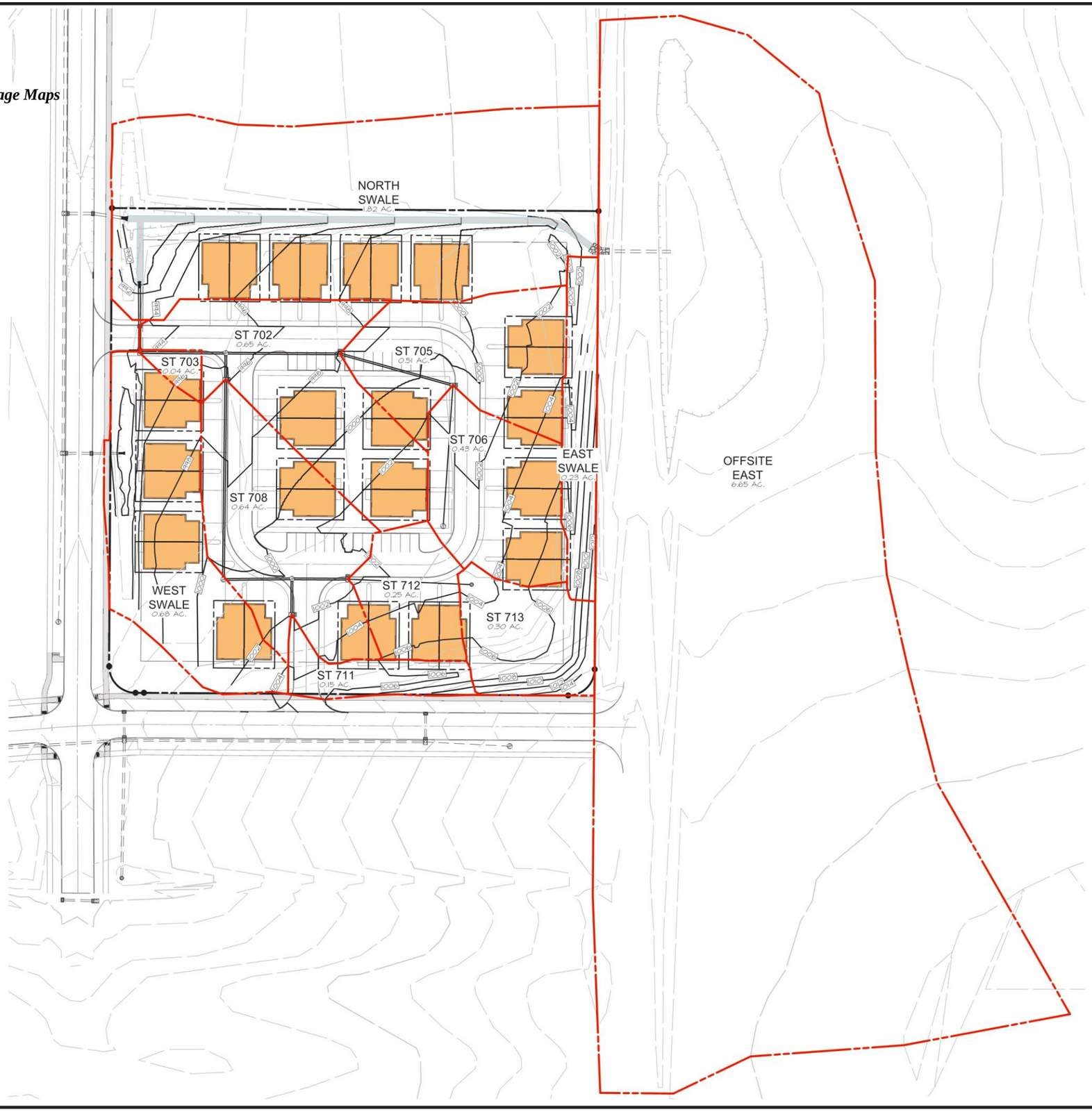
Figure 7E-10.04: Design of Outlet Protection, Maximum Tailwater Condition



4. Permits

5. Appendix

*a. **Drainage Maps***



Civil Engineering Consultants, Inc.
2400 86th Street . Unit 12 . Des Moines, Iowa 50322
515.276.4884 . mail@ceclac.com

CEC

SEPTEMBER 2020

DATE OF SURVEY:
DESIGNED BY:
DRAWN BY:

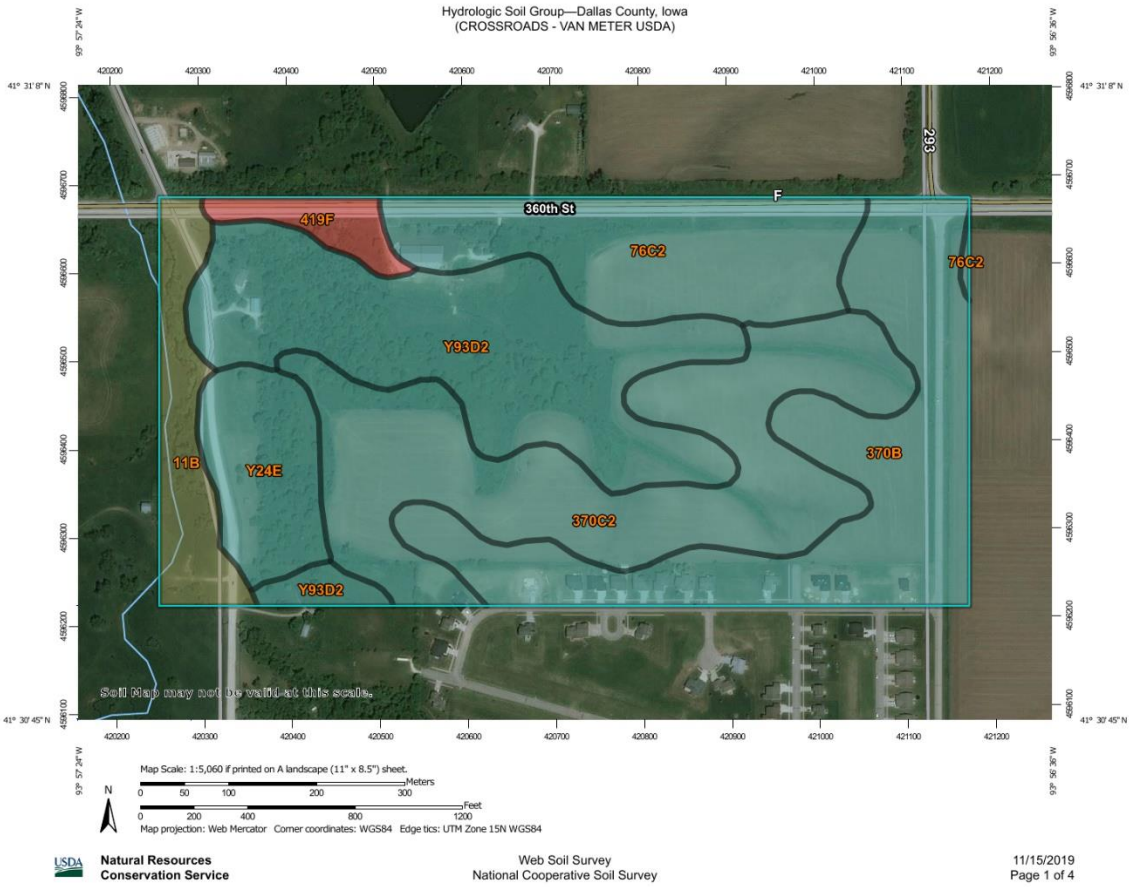
GRAND ESTATES PLAT 1 LOT 83
VAN METER, IOWA

INTAKE DRAINAGE MAP

SHEET
— OF 1

EB663

b. Web Soils Soil Report



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dallas County, Iowa
Survey Area Data: Version 25, Sep 12, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 26, 2012—Sep 28, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
11B	Colo, occasionally flooded-Ely silty clay loams, dissected till plain, 2 to 5 percent slopes	C/D	6.5	6.2%
76C2	Ladoga silty clay loam, dissected till plain, 5 to 9 percent slopes, eroded	C	15.2	14.4%
370B	Sharpsburg silty clay loam, 2 to 5 percent slopes	C	23.2	21.9%
370C2	Sharpsburg silty clay loam, 5 to 9 percent slopes, eroded	C	26.6	25.1%
419F	Vanmeter silt loam, 14 to 30 percent slopes	D	2.5	2.3%
Y24E	Shelby loam, dissected till plain, 14 to 18 percent slopes	C	7.1	6.7%
Y93D2	Shelby-Adair clay loams, dissected till plain, 9 to 14 percent slopes, eroded	C	24.8	23.5%
Totals for Area of Interest			**105.9**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

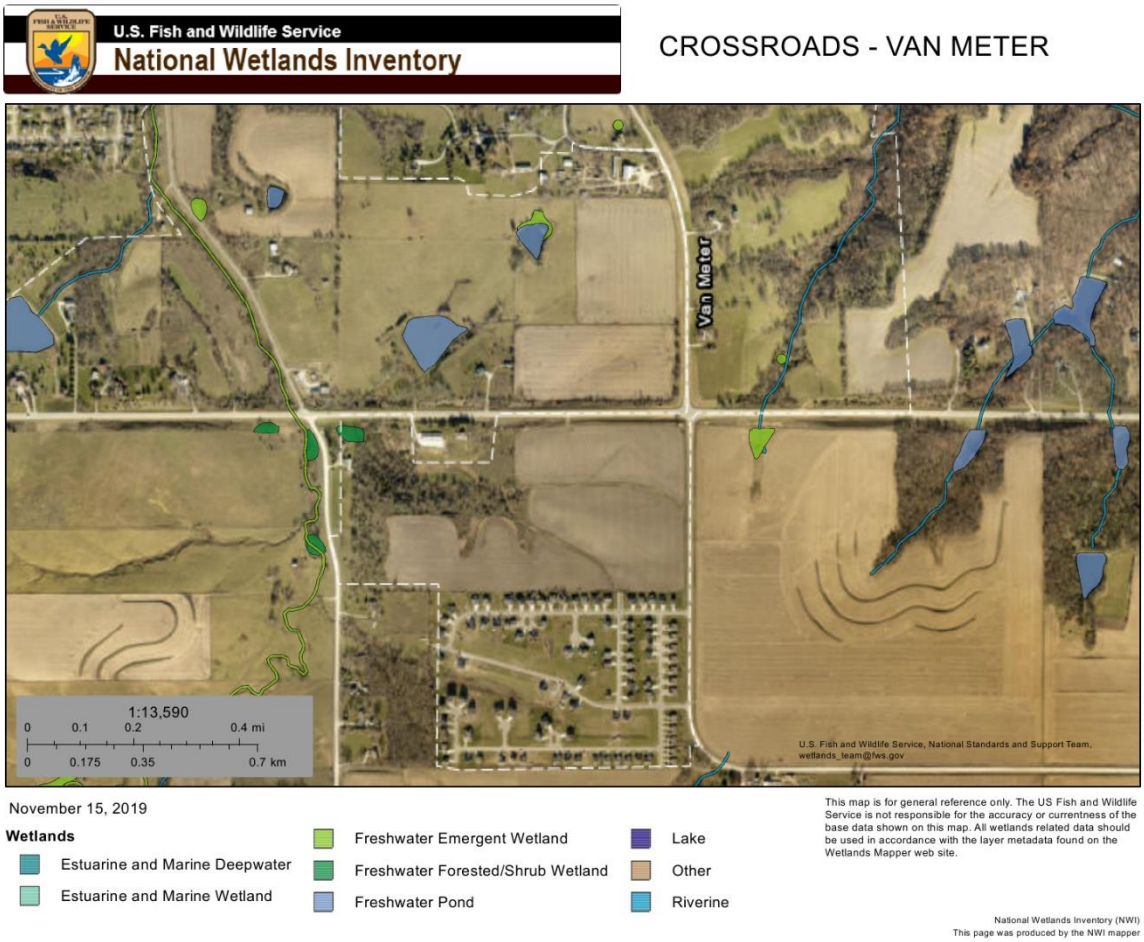
Rating Options

Aggregation Method: Dominant Condition

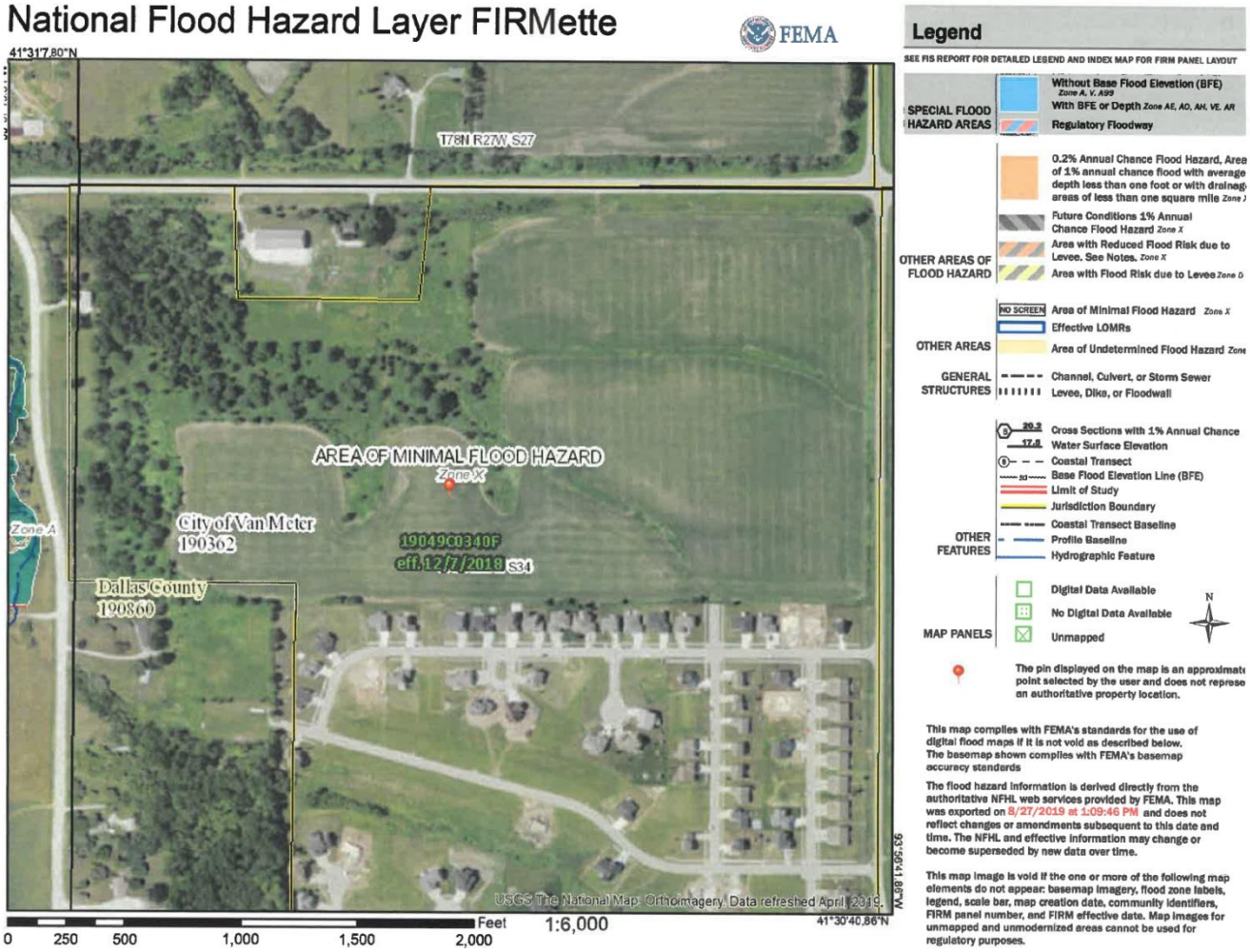
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

c. Wetlands


U.S. Fish and Wildlife Service
National Wetlands Inventory
CROSSROADS - VAN METER
Van Meter
1:13,590
0 0.1 0.2 0.4 mi
0 0.175 0.35 0.7 km
U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands_team@fws.gov
November 15, 2019
Wetlands
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

d. FEMA Flood Map



ABBREVIATIONS:

TYPICAL ABBREVIATIONS

BLDG.	BUILDING
BRG.	BEARING
BSMNT.	BASEMENT
CANT.	CANTILEVER
CLG.	CEILING
C.O.	CASED OPENING
CONC.	CONCRETE
CONT.	CONTINUOUS
D	DRYER
DBL.	DOUBLE
DIM.	DIMENSION
DR.	DOOR
D.V. GAS F.P.	DIRECT VENT GAS FIREPLACE
DW	DISHWASHER
FURN.	FURNACE
GYP.	GYPSUM
HDR.	HEADER
HGT.	HEIGHT
INSUL.	INSULATION
LIN.	LINEN
MFR.	MANUFACTURER
MIN.	MINIMUM
M.O.	MASONRY OPENING
O.C.	ON CENTER
O.H.	OVERHANG
O.H.D.	OVER HEAD DOOR
REF.	REFRIGERATOR
R.O.	ROUGH OPENING
SQ. FT.	SQUARE FOOT
TYP.	TYPICAL
UNEX.	UNEXCAVATED
U.C.	UNDER COUNTER
W	WASHER
WH	WATER HEATER

WINDOW ABBREVIATIONS

ARCH.	ARCHED
AWN.	AWNING
CSMNT.	CASEMENT
DH	DOUBLE HUNG
PICT.	PICTURE
SH	SINGLE HUNG
SLDR	SLIDER
S.L.	SIDELIGHT
TEMP.	TEMPERED

GENERAL NOTES:

SITE WORK:

CONTRACTOR SHALL VERIFY ALL GRADE CONDITIONS BEFORE START OF PROJECT. GRADE LINES ON THESE PLANS ARE MERELY A BEST CASE SCENARIO AND IN NO WAY INDICATE ACTUAL SITE CONDITIONS. CONTRACTOR SHALL VERIFY ALL FOOTING AND TOP OF FOUNDATION DROP DOWNS TO ACHIEVE DAYLIGHT OR WALK OUT BASEMENTS. ALL FOOTINGS SHALL BE A MINIMUM OF 42" BELOW GRADE. SITE DRAINAGE SHALL MEET ALL CODE REQUIREMENTS.

FRAMING:

ALL WALL HEIGHTS SHALL BE VERIFIED WITH TRUSS MFR. PLANS. TRUSS MFR. PLANS SHALL TAKE PRECEDENCE OVER THESE PLANS.
ALL NAILING SHALL CONFORM TO IBC TABLE 2304.9.1 FASTENING SCHEDULE.
ALL HEADERS SHALL BE FREE OF SPLITS.
THE FRAMER SHALL ADJUST LAYOUT OR PLACEMENT OF FRAMING MEMBERS TO PROVIDE REQUIRED CLEARANCES FOR ALL MECHANICAL AND PLUMBING SYSTEMS WHILE MAINTAINING STRUCTURAL INTEGRITY.
SPECIES:
ALL EXTERIOR STUDS SHALL BE STUD GRADE PRECUTS OR DOUGLAS FIR #2 OR BETTER, WCLIB OR WWPA GRADING REQUIREMENTS.
WALL PLATES SHALL BE SOUTHERN PINE FIR #2 OR BETTER NLGA GRADING REQUIREMENTS.
SILL PLATES SHALL BE SOUTHERN YELLOW PINE #2 OR BETTER ACQ .40 PRESSURE TREATED, OR TREATED TIMBERSTRAND SILL (RECOMMENDED)
EXTERIOR DECK FRAMING SHALL BE SOUTHERN YELLOW PINE #2 OR BETTER ACQ .40 PRESSURE TREATED.

STAIRS:

ALL STAIRS SHALL MEET REQUIREMENTS OF IRC SECTION R311.
CONTINUOUS HANDRAIL TO BE 34"-38" ABOVE NOSING.
STAIR ILLUMINATION AS PER IRC SECTION R303.6.
MIN. HEADROOM AT STAIRS SHALL BE 6'-8" FROM STAIR NOSING TO FINISHED CEILING.

FIREPLACE:

FIREPLACES TO BE INSTALLED AS PER MFR. SPECS.
FIREPLACE DIMENSIONS SHOWN ON PLAN ARE FOR MAJESTIC 36LDVR DIRECT VENT GAS FIREPLACE (R.O. 36.5" W/ 35" H/ 16.5" D), OR 2 SIDED MAJESTIC DVTS2 (R.O. 40.5" W/ 34.5" H/ 22" D) UNLESS NOTED OTHERWISE. CONTRACTOR SHALL ADJUST AS NEEDED FOR ANY FIREPLACE OTHER THAN THOSE LISTED ABOVE.
WOOD BURNING FIREPLACES SHALL BE FRAMED AS PER MFR. SPECS AND SHALL MEET ALL CODE REQUIREMENTS FOR CLEARANCES TO COMBUSTIBLE MATERIALS.

THERMAL AND MOISTURE PROTECTION:

INSTALL ROOF AND EAVE VENTS AS PER IRC SECTION R806.2.
INSTALL 36" WIDE (MIN.) BITUTHENE OR EQUAL WATER AND ICE BARRIER AT ALL EAVES AND VALLEYS IN ACCORDANCE WITH IRC SECTION R905.2.7.1.
WATERPROOF FOUNDATION WALLS FROM FOOTING TO FINISHED GRADE- VERIFY TYPE WITH CONTRACTOR.
FIELD VERIFY LOCATION OF SUMP PUMP.
GUTTERS AND DOWNSPOUT LOCATIONS TO BE DETERMINED BY CONTRACTOR AND SHALL PROVIDE ADEQUATE DRAINAGE.
AIR INFILTRATION BARRIER SHALL BE INSTALLED OVER WALL SHEETING, 2 LAYERS BEHIND ALL CULTURED STONE VENEER OR STUCCO FINISH.
INSULATION:
2X4 WALLS- MIN. R-13 BATT INSULATION
2X6 WALLS- MIN. R-19 BATT INSULATION
FOUNDATION- MIN. 2" DOW BLUEBOARD, R-10
CEILINGS- MIN. R-40 BLOWN IN

FINISHES:

EXTERIOR WALLS SHALL HAVE 1 LAYER 1/2" GYP. BOARD TO INTERIOR FACE.
INTERIOR WALLS SHALL HAVE 1 LAYER 1/2" GYP. BOARD ON EACH SIDE.
CEILINGS SHALL HAVE 1 LAYER 5/8' GYP. BOARD.
GARAGE WALLS AND CEILING SHALL HAVE 1/2" GYP. BOARD APPLIED TO GARAGE SIDE OF WALL (IRC SECTION R302.6)
GARAGE CEILINGS BELOW HABITABLE ROOMS SHALL HAVE 1 LAYER 5/8" TYPE 'X' GYP. BOARD (IRC SECTION R302.6)
WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2" GYP. BOARD.

DISCLAIMER:

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WHILE IT IS OUR INTENT TO ELIMINATE ERRORS, WE CANNOT BE LIABLE FOR HUMAN ERRORS THAT MAY OCCUR. THEREFORE IT IS THE CONTRACTOR OR BUYERS RESPONSIBILITY TO REVIEW ALL PLANS AND DOCUMENTS AND REPORT ANY ERRORS TO BEISSER DESIGN SERVICE PRIOR TO CONSTRUCTION.

SEE DETAILED NOTES ON FLOOR PLANS FOR DESIGN LOADS, WINDOW NOMENCLATURE, WALL HEIGHTS AND THICKNESS, HEADER SIZES, AND OTHER MATERIALS SPECIFIC TO THIS PLAN.

LEGEND:

A — SECTION LINES
SMOKE DETECTORS
EXHAUST FANS

BEISSER DESIGN SERVICES

DRAWN BY: A. LARSEN

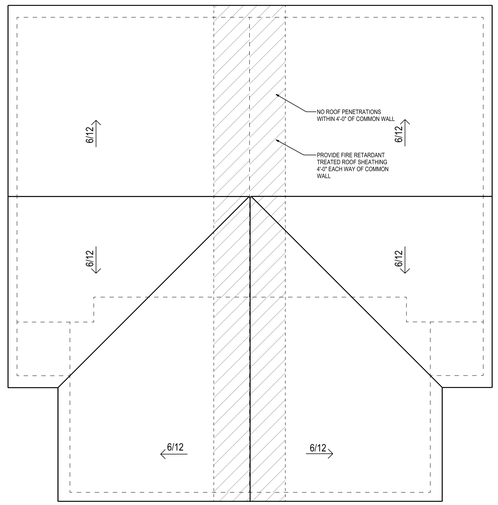
COSGRIFF DEVELOPMENT
GRANGER DUPLEXES
1515-1517 MULBERRY ST. 2306-2308 CEDAR ST.
1519-1521 MULBERRY ST. 2324-2400 CHESTNUT ST.
2302-2304 CEDAR ST. 2320-2322 CHESTNUT ST.

DATE 4-2-2021
REVISED 4-6/4-16-2021
7-1-2021

SCALE: As Noted

SHEET: A1
Cover Sheet

PLAN NO. 1128-21



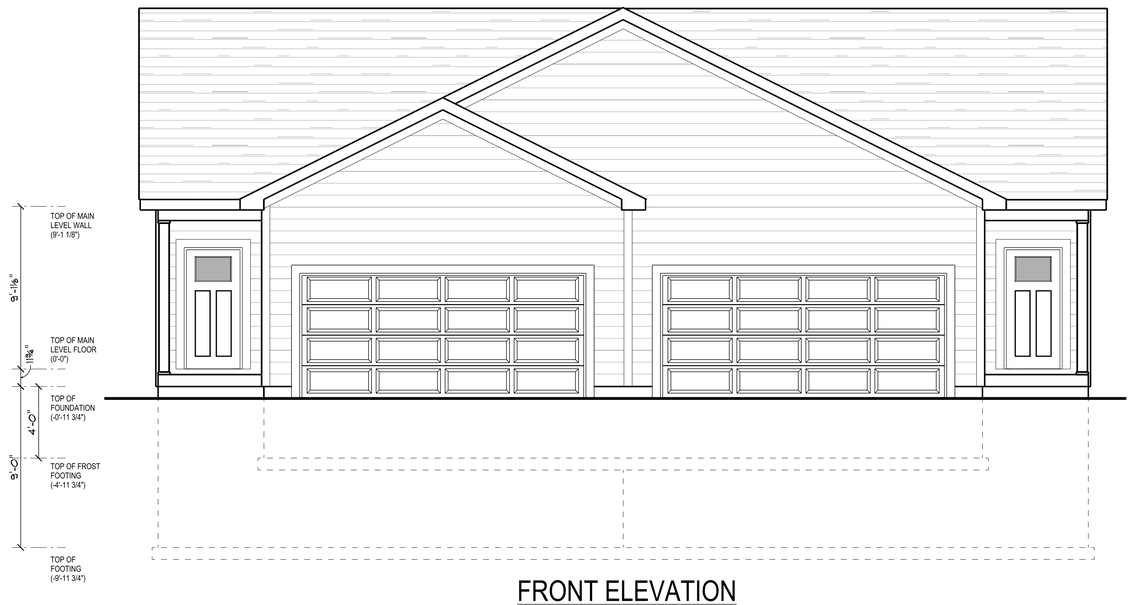
ROOF PLAN

1/8" = 1'-0"

ALL ROOF PITCHES ARE 6/12 WITH 12" HEEL HEIGHTS

ALL GABLE OVERHANGS ARE 1'-0"
ALL EAVE END OVERHANGS ARE 1'-4"

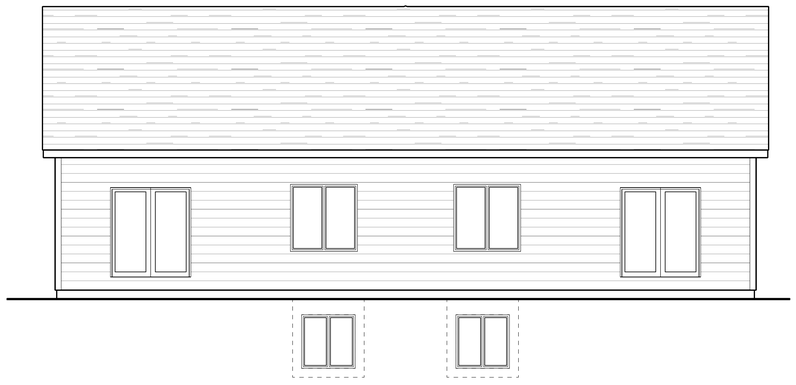
PLEASE NOTE THAT THIS ROOF PLAN IS PROVIDED AS A REFERENCE TOOL ONLY - THE TRUSS MANUFACTURE IS RESPONSIBLE FOR PROVIDING A DETAILED TRUSS LAYOUT WITH ALL GIRDER PLACEMENT, HANGER DETAILS, ETC. - ANY QUESTIONS ARE TO BE DIRECTED TO THE TRUSS MANUFACTURE, BUILDER, AND/OR THIS DESIGNER. HOMEBUILDER HAS FINAL RESPONSIBILITY FOR ALL ASPECTS OF THIS PLAN. TRUSS MANUFACTURE TO ADJUST HEEL HEIGHTS AS NEEDED TO FLUSH OUT OVERHANGS. DO, HOWEVER, NOTE THAT SOME ADDITIONAL TRIMBOARDS MAY BE USED ON THIS DESIGN AND SHOULD NOT BE INTERFERED WITH.



FRONT ELEVATION

1/4" = 1'-0"

CONSTRUCTION NOTES:
1. DESIGN DRAWN IN ACCORDANCE W/ I.R.C. AND TYPICAL BUILDING PRACTICES IN CENTRAL IOWA.
2. TRUSS MFR. TO SUPPLY LAYOUT/DETAILS ON ANY/ALL PRODUCTS THEY ARE PROVIDING/ THOSE LAYOUTS/DETAILS WILL TAKE PRECEDENCE OVER ANY DETAILS SHOWN HERE. TRUSS DESIGN TO BE BASED ON TC LL 30/TC DL 10/BC DL 10 LOADING CRITERIA. DEFLECTION ON ROOF BASED OFF OF ROOF @ L/180, CEILING L/240.
3. FLOOR SYSTEM ON THIS PLAN TO BE CONSTRUCTED OF ENGINEERED I-JOISTS WITH LOADING BASED ON 40LB. LL/15LB. DL @ A L/480 DEFLECTION MINIMUM.
4. ANY I-JOIST QUESTIONS/DETAILS CAN BE REFERRED TO THIS DESIGNER OR I.J. MFR.
5. MICROLAM/LVL BEAMS ARE SIZED AS LP 2600 Fb 1.9E SERIES AT A L/360 DEFLECTION.
6. ANY/ALL EXTERIOR DIMENSIONS RUN TO/FROM OUTSIDE OF STUD.
7. INTERIOR DIMENSIONS RUN TO/FROM EDGE OF STUD AND CENTER OF BEAM.
8. ALL HEADERS IN 2x4 WALL TO BE DOUBLE 2x12, UNLESS NOTED OTHERWISE.
9. ALL HEADERS IN 2x6 WALL TO BE TRIPLE 2x12, UNLESS NOTED OTHERWISE.
10. PROVIDE PROPER BEARING UNDER ALL HEADERS/BEAMS/JOISTS ETC.
11. INSULATE ANY/ALL CANTILEVERS AND BLIND CORNERS, WALL VOIDS, ETC.
12. PROVIDE SOLID BLOCKING BEHIND ALL TOWEL BARS, HANDRAIL BRKTS, CLOSET ROD SUPPORTS, CURTAIN ROD SUPPORTS, ETC.
13. WINDOW NOMENCLATURE IS FOR UNIT SIZE IN FEET (ie 2650 = 2'-6" x 5'-0"). **ALL WINDOWS/DOORS TO BE CONFIRMED BY BUILDER/HOMEOWNER BEFORE ORDERING**
14. ANY ALL OPENINGS/EXTERIOR WALLS EXPOSED IN BASEMENT WILL BE DETERMINED BY THE SLOPE OF LAND AFTER EXCAVATION.
15. ANY DESIGN CHANGES TO THIS PLAN WHICH AFFECT ANY STRUCTURAL MEMBERS SHOULD BE APPROVED BY THIS DESIGNER OR A STRUCTURAL ENGINEER.
16. BUILDER/OWNER HAVE FINAL DECISIONS ON ALL ASPECTS OF PLAN.
17. ANY/ALL HEADERS AND BEAMS ARE DROPPED UNLESS NOTED OTHERWISE.

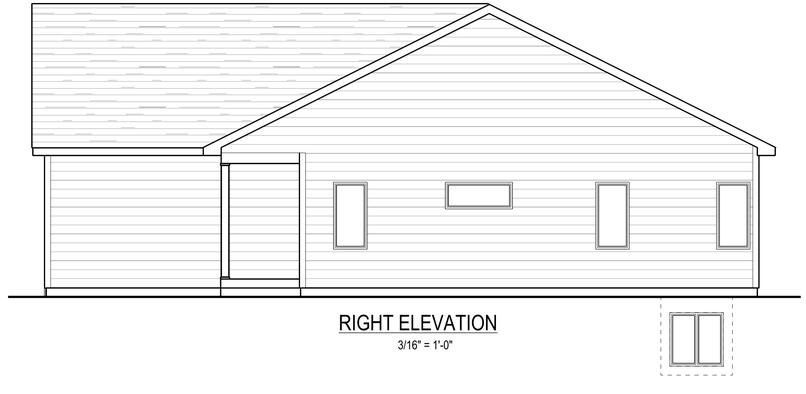


REAR ELEVATION

3/16" = 1'-0"

LEFT ELEVATION

3/16" = 1'-0"



RIGHT ELEVATION

3/16" = 1'-0"

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DRAWN BY:
A. LARSEN

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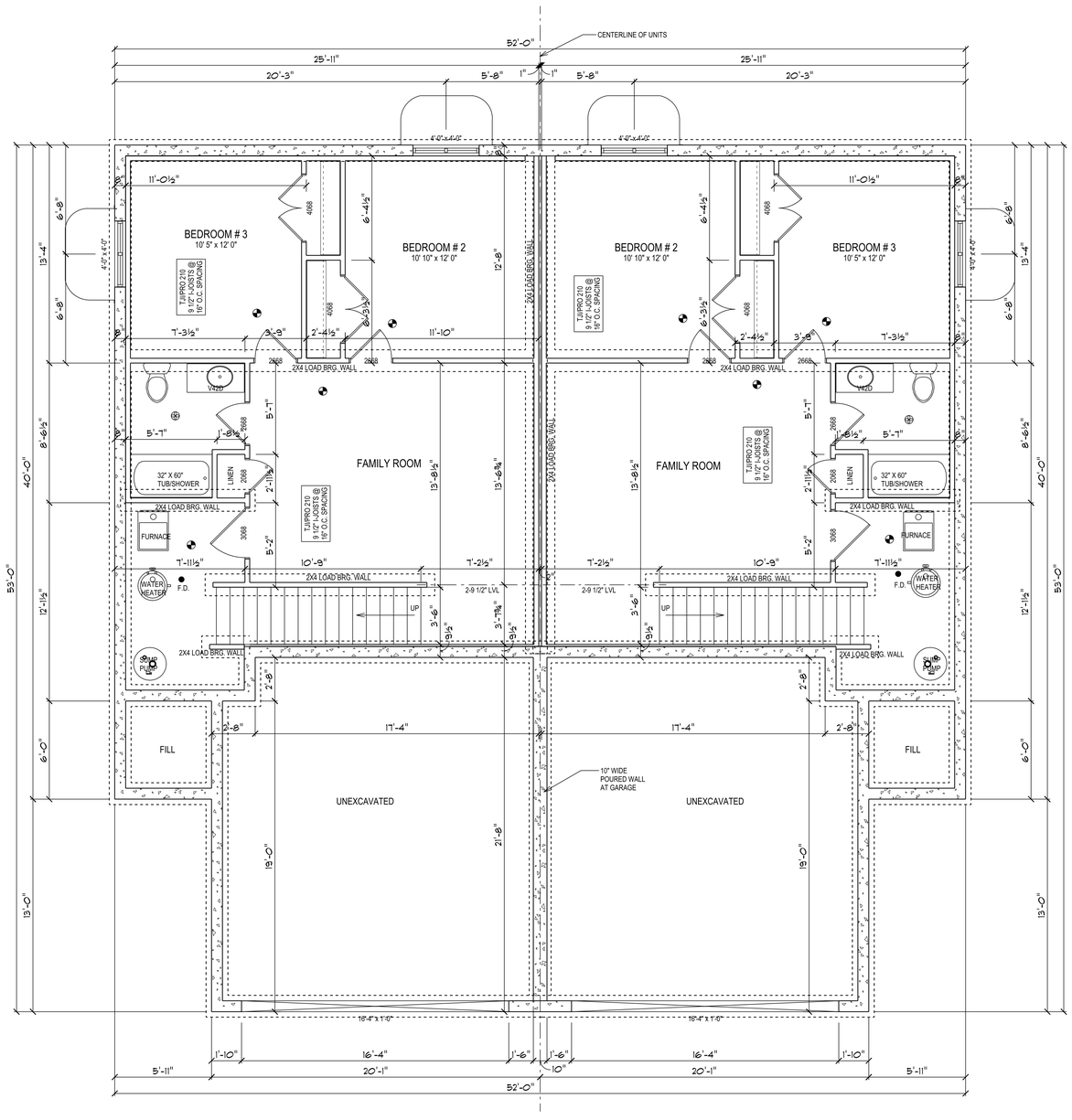
COSGRIFF DEVELOPMENT
GRANGER DUPLEXES

1515-1517 MULBERRY ST. 2306-2308 CEDAR ST.
1519-1521 MULBERRY ST. 2324-2400 CHESTNUT ST.
2302-2304 CEDAR ST. 2320-2322 CHESTNUT ST.

DATE
4-2-2021
REVISED
4-6/4-16-2021
7-1-2021
SCALE: As Noted
SHEET: A2 FRONT
PLAN NO. 1128-21



FOUNDATION PLAN

635 SQ. FT. FINISHED, EACH UNIT

NOTES:

* 8" X 9'-0" POURED CONCRETE WALLS ON A 16" X 8" CONTINUOUS FOOTING WITH 2-#4 REBAR CONTINUOUS.
* FOOTING CALCULATIONS ARE BASED ON A 2,000 PSF SOIL CAPACITY.
* ALL HEADERS AND BEAMS ARE BELOW DECK UNLESS NOTED "FLUSH".
* EXTERIOR DIMENSIONS ARE TO OUTSIDE OF CONCRETE. INTERIOR DIMENSIONS ARE TO EDGE OF STUD AND CENTER OF BEAM.
* DESIGN CRITERIA IS BASED ON LOCAL BUILDING CODES AND PRACTICES AND THE I.R.C.
* DESIGN LOADING IS AS FOLLOWS:
  ROOF: 30 PSF LIVE + 20 PSF DEAD = 50 PSF TOTAL
  FLOOR: 40 PSF LIVE + 15 PSF DEAD = 55 PSF TOTAL (MIN. DEFLECTION IS L/480).
  WIND: 90 PSF (IOWA)
* ANY CHANGES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
* MICROLAM/LVL BEAMS ARE SIZED AS TJ 2600 Fb 1.9E SERIES AT A L/360 DEFLECTION.

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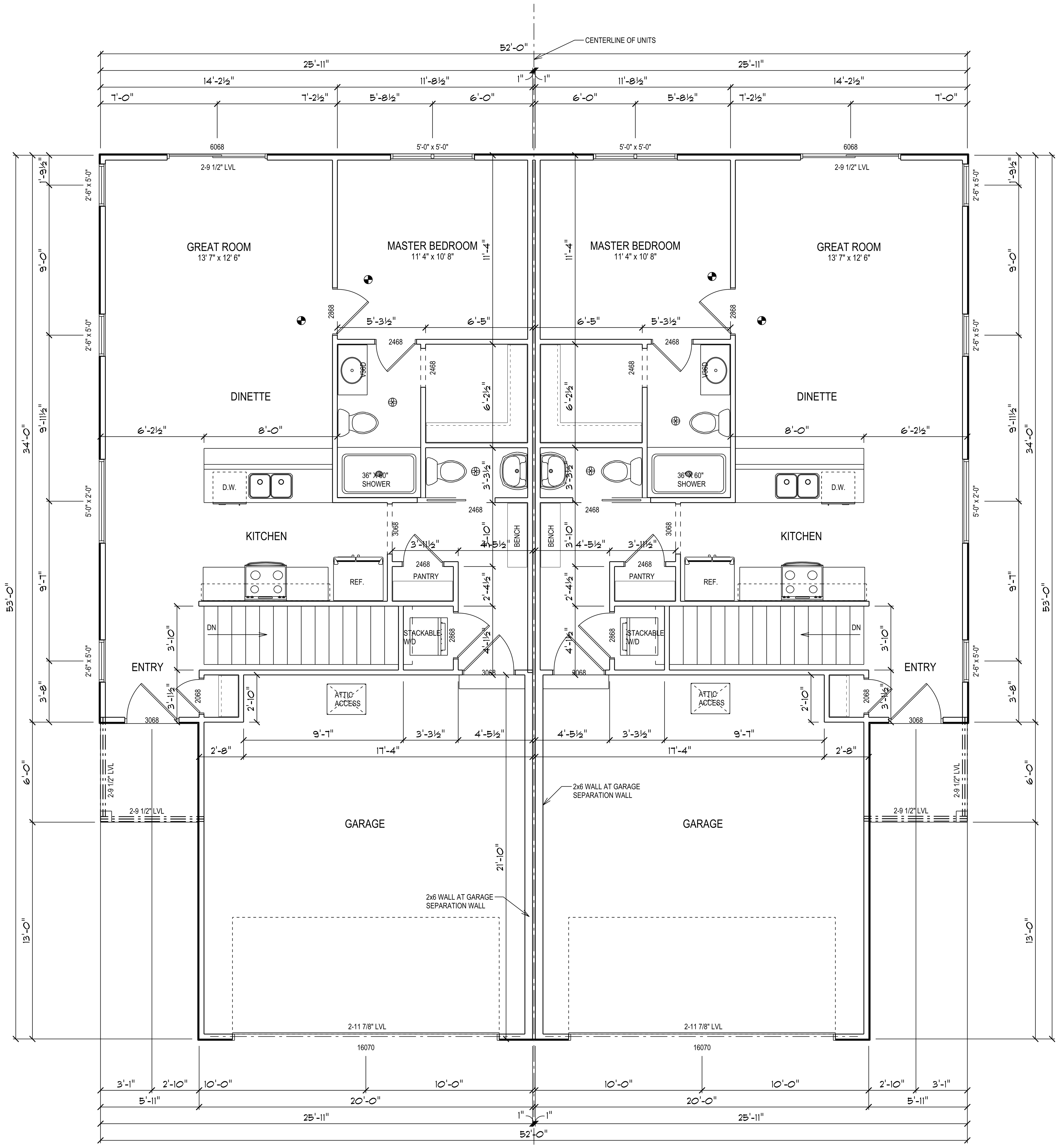
COSGRIFF DEVELOPMENT
GRANGER DUPLEXES

1515-1517 MULBERRY ST. 2306-2308 CEDAR ST.
1519-1521 MULBERRY ST. 2324-2400 CHESTNUT ST.
2302-2304 CEDAR ST. 2320-2322 CHESTNUT ST.

DATE
4-2-2021
REVISED
4-6/4-16-2021
7-1-2021
SCALE: 1/4" = 1'-0"
SHEET: A3 FOUNDATION
PLAN NO. 1128-21



MAIN LEVEL PLAN

831 SQ. FT.

NOTES:

* 2x4-9' 1 1/8" WALLS WITH 7/16" SHEATHING.
* EXTERIOR DIMENSIONS ARE TO OUTSIDE OF STUD. INTERIOR DIMENSIONS ARE TO EDGE OF STUD AND CENTER OF BEAM.
* ALL HEADERS AT EXTERIOR OPENINGS ARE 2-2X12 WITH 1/2" FILLER UNLESS NOTED OTHERWISE.
* ALL HEADERS AND BEAMS ARE BELOW DECK (DROPPED) UNLESS NOTED "FLUSH".
* PROVIDE SOLID BLOCKING BEHIND ALL CURTAIN RODS, TOWEL BARS, RAILING, ETC.
* INSULATE, VAPOR BARRIER, AND SHEET ALL WALL CAVITIES BEHIND TUB AND/OR SHOWER ENCLOSURES AND UP TO THE DECK OF WHIRLPOOLS.
* TRUSS MANUFACTURER TO SUPPLY ROOF LAYOUT WITH GIRDER LOCATIONS DETERMINED. SPECIFY AND SUPPLY ALL GIRDER CONNECTIONS.
* WINDOW NOMENCLATURE IS FOR UNIT SIZE IN FEET (ie 2650 = 2'-6" x 5'-0").
* VERIFY ALL WALL HEIGHTS WITH TRUSS MFR. PLANS.
* MICROLAM/LVL BEAMS ARE SIZED AS TJ 2600 Fb 1.9E SERIES AT A L/360 DEFLECTION.

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COSGRIFF DEVELOPMENT
GRANGER DUPLEXES

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2302-2304 CEDAR ST. 2320-2322 CHESTNUT ST.

DATE	4-2-2021
REVISED	4-6/4-16-2021 7-1-2021
SCALE:	1/4" = 1'-0"
SHEET:	A4 MAIN
PLAN NO.	1128-21

R602.10.5 Continuous wood structural panel sheathing....Table R602.10.5 Length requirements for braced wall panels in a continuously sheathed wall, exception "c"... (For more, Reference the 2006 IRC Code)

NOTES AND REFERENCES:

*REQUIRES THE ENTIRE STRUCTURE TO BE CONTINUOUSLY SHEATHED USING METHOD 3

HEADER MATERIAL:
WHEN SIZED FOR LOADS, NO LESS THAN (2) 2x12's CAN BE USED, FASTEN TOGETHER W/16d NAILES @ 16" O.C. ALONG EACH EDGE (TABLE R602.3(1)). A SPACER, IF USED, SHALL BE PLACED ON THE SIDE OF THE BUILT-UP BEAM OPPOSITE THE WOOD STRUCTURAL PANEL SHEATHING (INSIDE).

WHEN SIZED FOR LOADS, (2) OR MORE PLIES OF 1 3/4" LVL OR FULL WIDTH LVL/GLU-LAMINATED BEAMS CAN BE USED, AS LONG AS THE BEAM DEPTH IS AT LEAST 11 1/4". INSTALL BEAM PER MANUF. SPECIFICATIONS.

IF THERE ARE MULTIPLE OPENINGS IN A CONTINUOUS WALL LINE, INSTALL A HEADER FOR EACH OPENING (DO NOT USE A FULL LENGTH HEADER OVER BOTH OPENINGS.) PROVIDE ADEQUATE END-BEARING/BRACED PANEL FOR EACH INDIVIDUAL HEADER, AS NEEDED.

1000 LB. STRAP:
SIMPSON LSTA21 OR LSTA24. USE 10d COMMON NAILS (3"x0.148" DIA.) OR 10d x 1 1/2" (1.5"x0.148" DIA.) ALTERNATE PNUEMATIC FASTENERS MUST BE EQUAL TO THE STRENGTH, LENGTH, AND DIAMETER SPECS OF EITHER 10d NAIL OPTIONS IN ORDER TO BE USED.

NAILING:
8d GALVANIZED BOX NAILS (2 1/2"x0.113" DIA.) OR 8d COMMONS (2 1/2"x0.131" DIA.)-- ALTERNATE PNUEMATIC FASTENERS MUST BE EQUAL IN STRENGTH, LENGTH, AND DIAMETER SPECS OF 8d COMMONS IN ORDER TO BE USED.

16d SINKERS (3 1/4"x0.148" DIA.)-- ALTERNATE PNUEMATIC FASTENERS MUST BE EQUAL TO THE STRENGTH, LENGTH, AND DIAMETER SPECS OF 16d SINKERS IN ORDER TO BE USED.

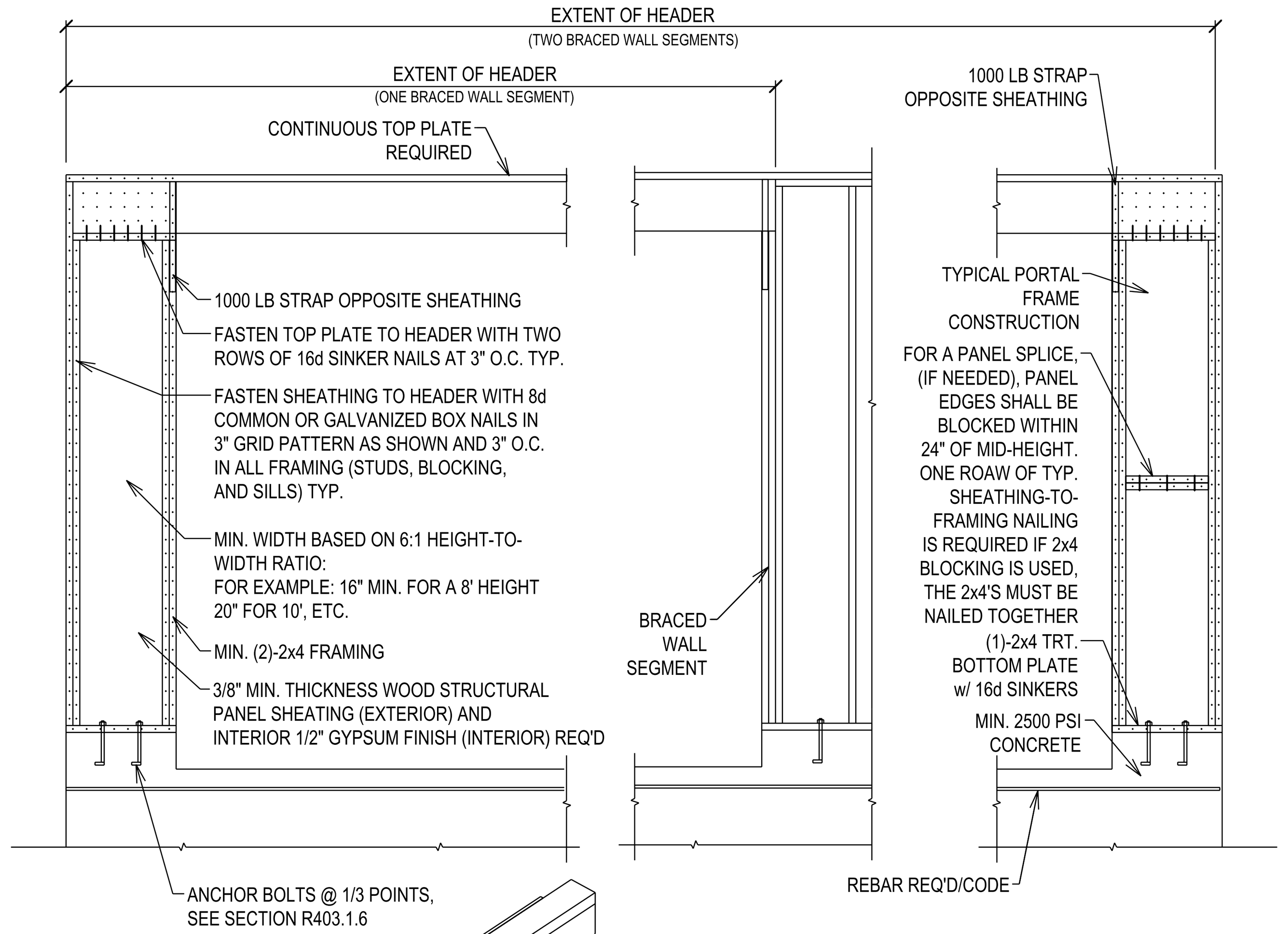
VERIFY ALTERNATE NAILING, NOT ALL APPLICATIONS ALLOW THE USE OF ALTERNATE FASTENERS.

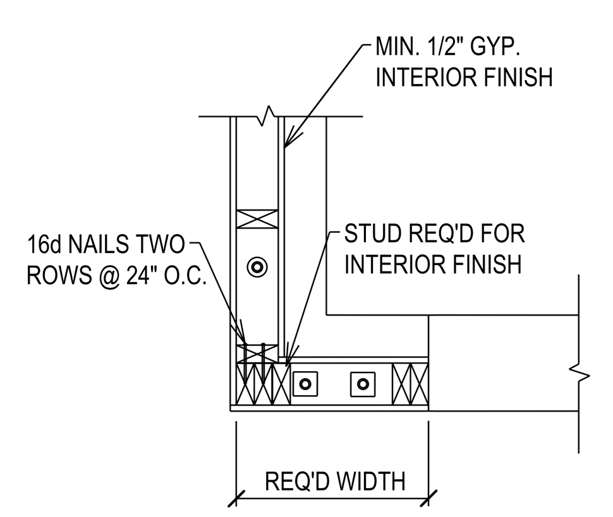
2x4 FRAMING:
ANY 2006 IRC RECOGNIZED WALL FRAMING SPECIES MAY BE USED, INCLUDING TIMBERSTRAND LSL LUMBER. SOLID COLUMN STOCK COULD ALSO BE USED INSTEAD OF MULTIPLE 2x PIECES.

ANCHOR BOLT:
ANCHOR BOLT WITH NUT AND WASHER PER R403.1.6 INSTALLED AT THE THIRD POINTS OF THE PLATE.

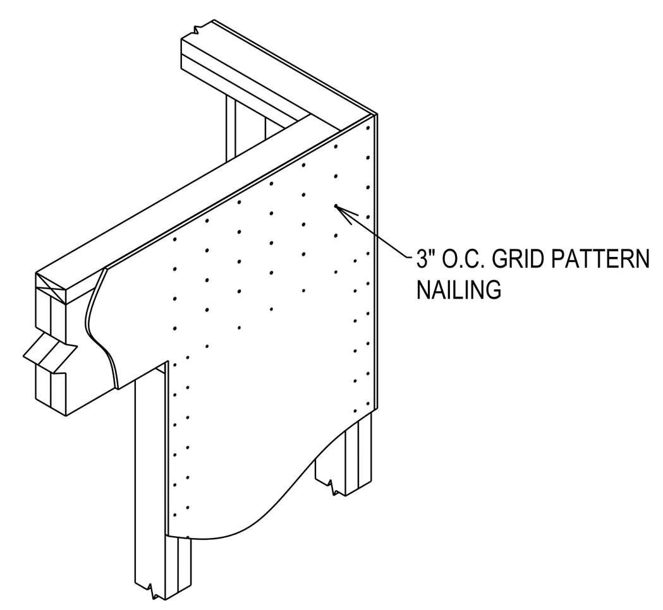
ALLOWABLE PENETRATIONS:
"...IT IS BEST NOT TO DRILL ANY HOLES IN THE APA NARROW WALL BRACING METHOD (NWBM) SHEATHING. HOWEVER, APA ENGINEERS HAVE INDICATED A 7/8" OR SMALLER HOLE IS PROBABLY OK. WITH A SMALL HOLE, BUILDERS COULD THEN USE A DIRECT MOUNT SHALLOW BOX FOR LIGHT FIXTURES. HOLE PLACEMENT SHOULD BE NEAR THE CENTER OF THE WALL WIDTH AND AWAY FROM THE PANEL NAILING. (APA REPORT T2004-54, THE EFFECT OF CONSTRUCTION TOLERANCES AND CONSTRUCTABILITY ON THE APA PORTAL FRAME DESIGN) AS FOR NWBM FRAMING, WE FEEL THAT HOLES MEETING BUILDING CODE CRITERIA ARE ACCEPTABLE."
--MERRIT KLINE, APA PRODUCT SUPPORT SPECIALIST, JUNE 2008

FIGURE R602.10.6.2
ALTERNATE BRACED WALL PANEL ADJACENT TO A DOOR OR WINDOW OPENING USING EXCEPTION "C" TABLE R602.10.5*

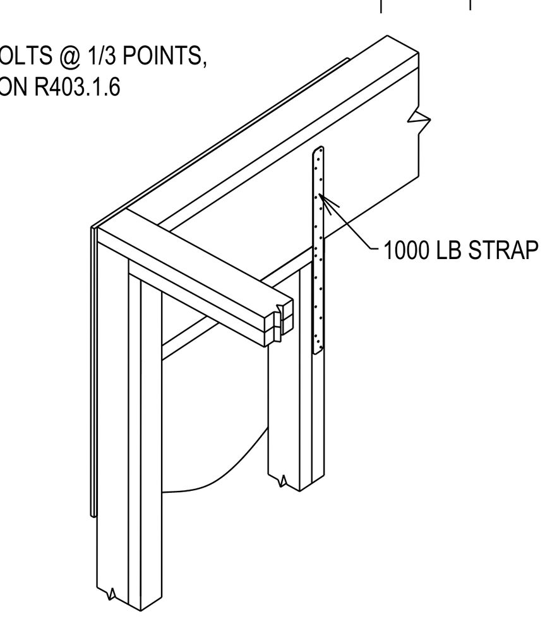




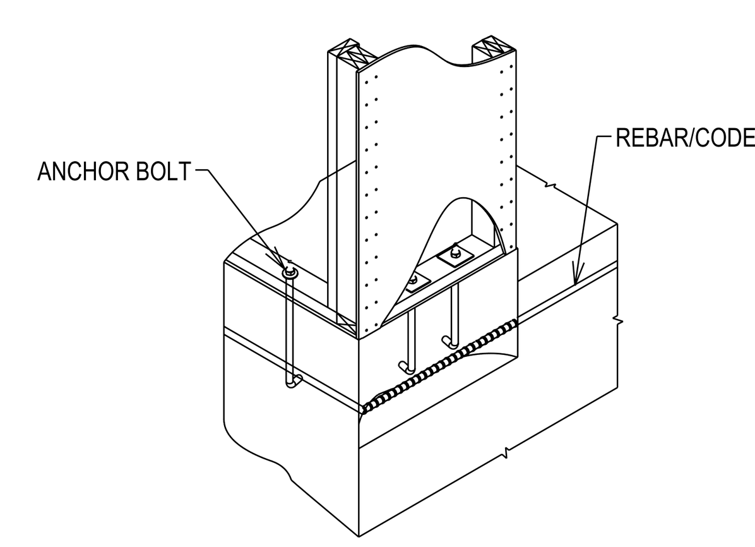
CORNER FRAMING



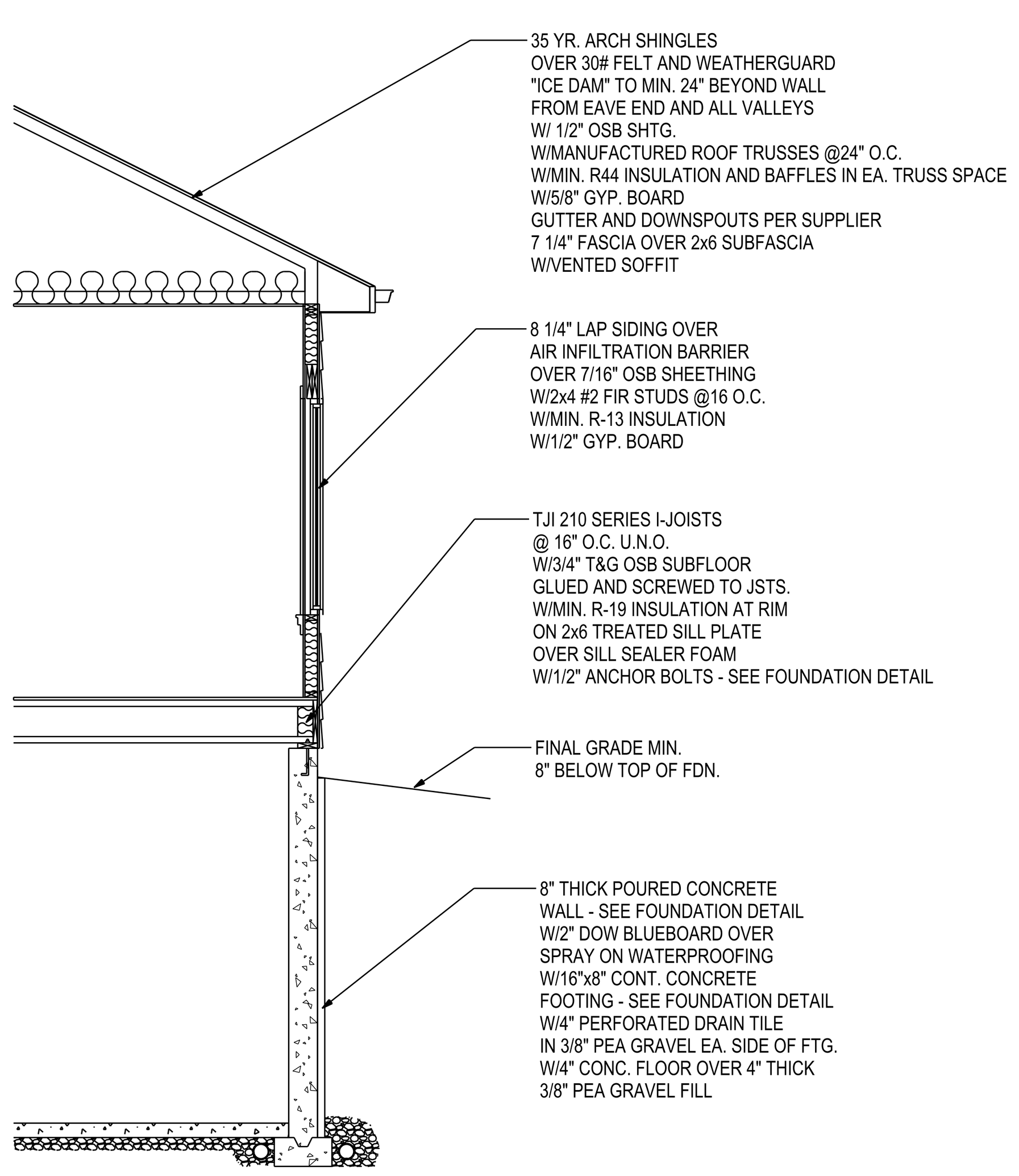
OUTSIDE ISOMETRIC



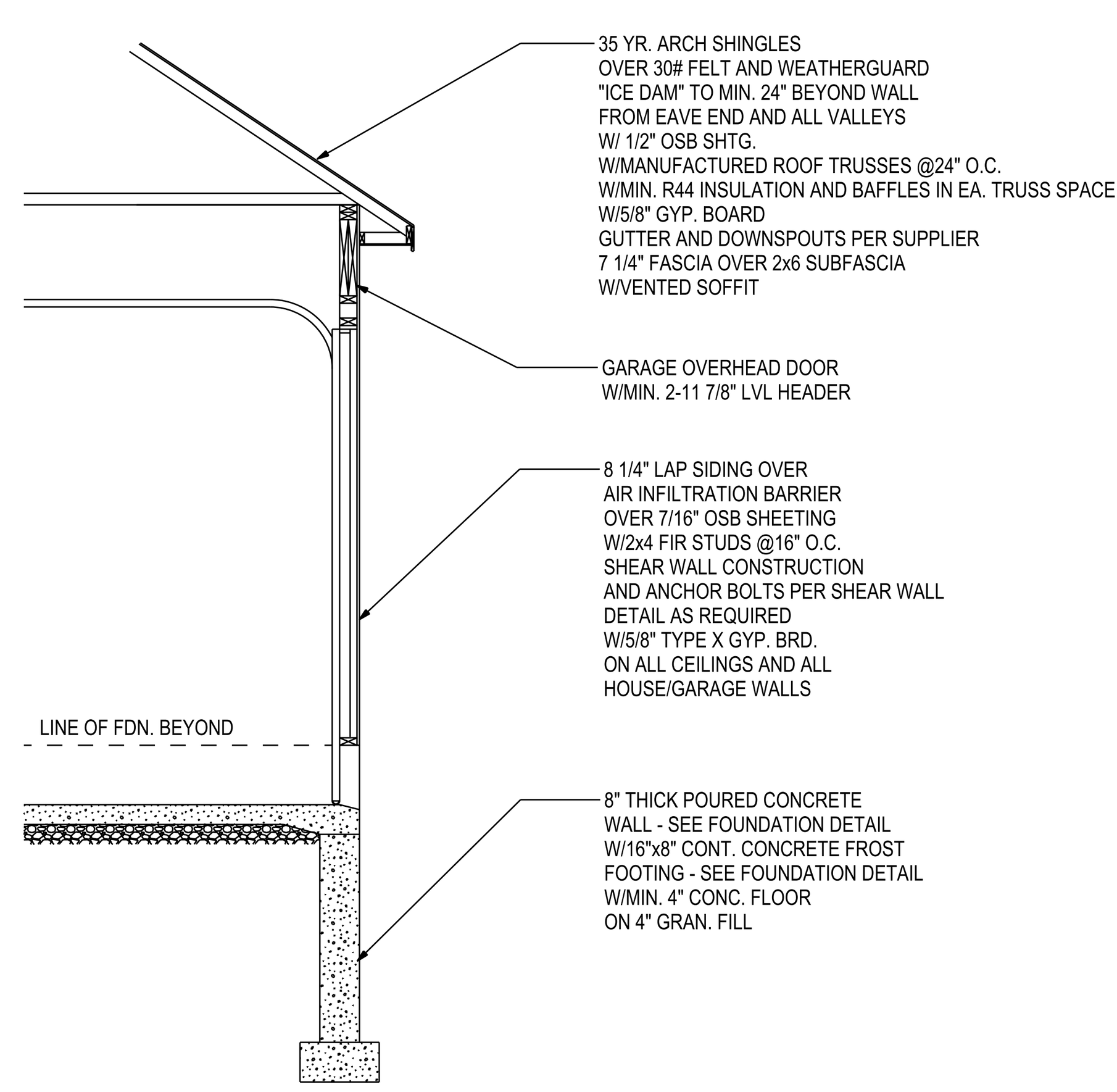
INSIDE ISOMETRIC



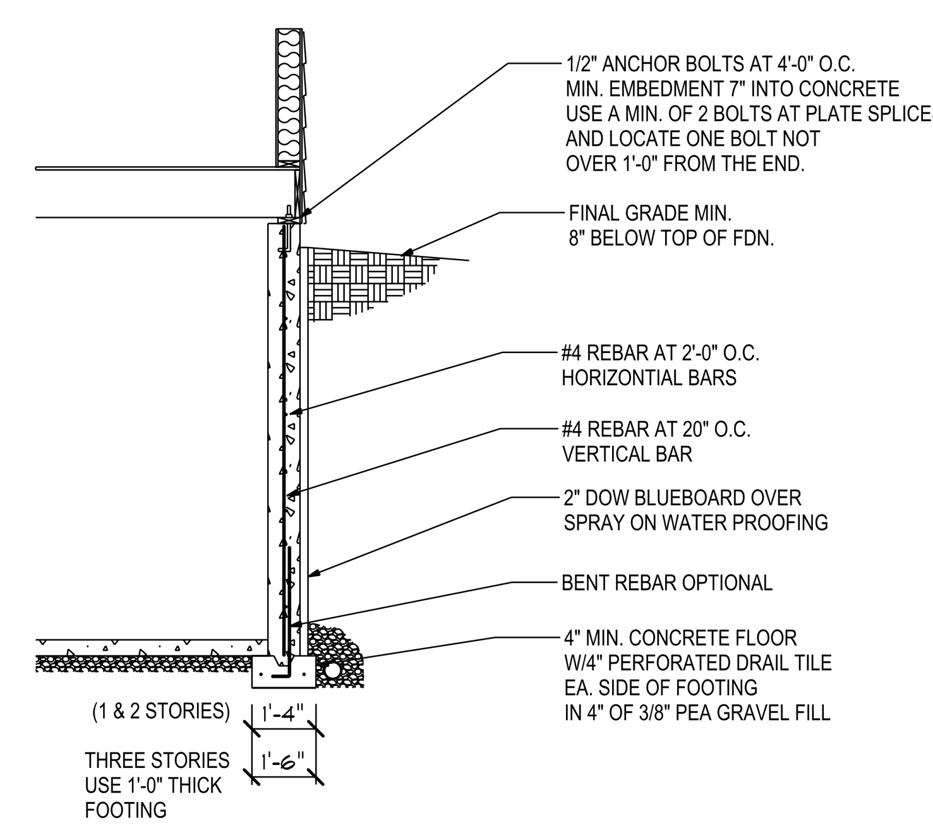
CUT-AWAY ISOMETRIC



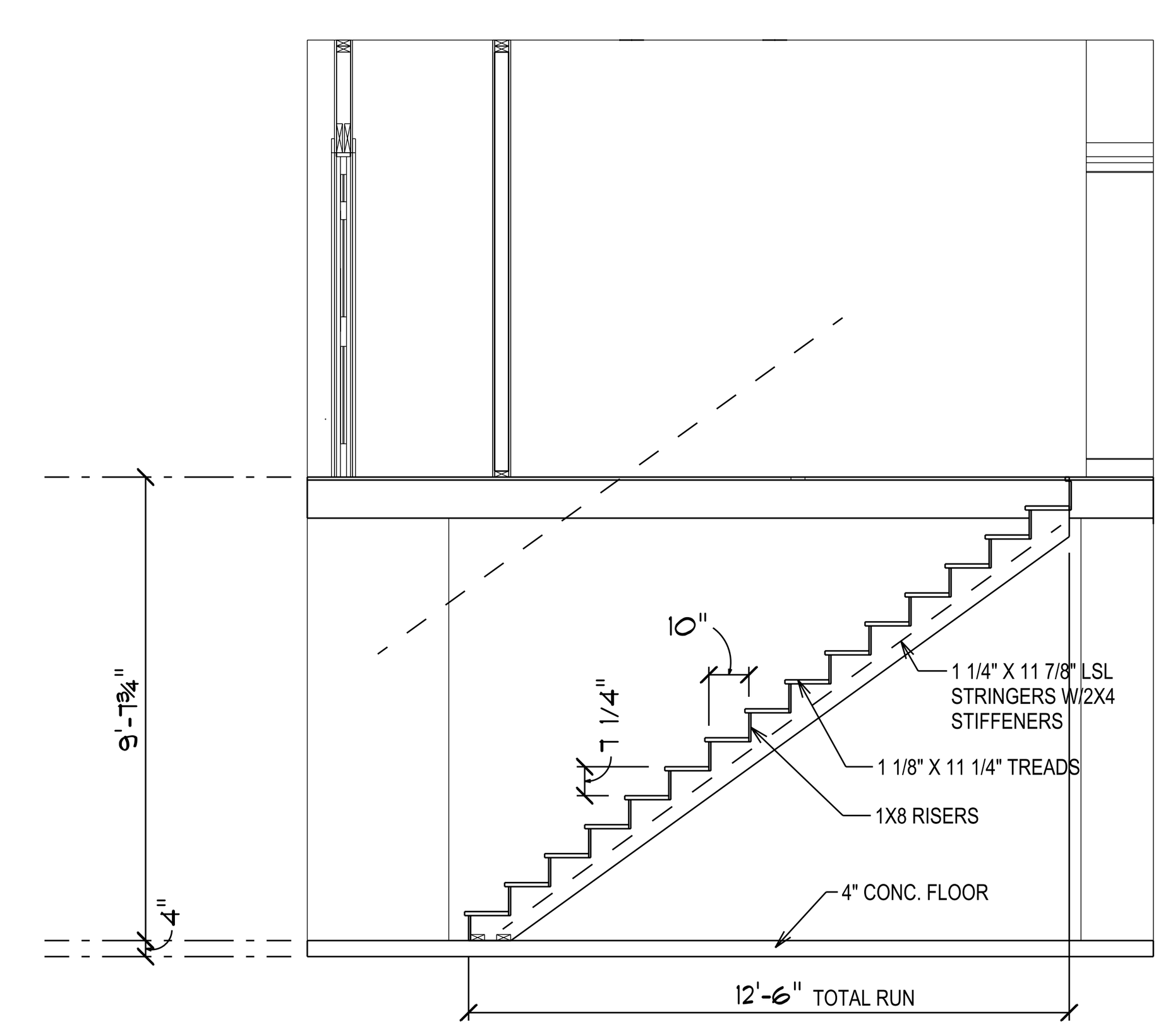
TYPICAL WALL SECTION
1 STORY - 2x4 WALL



TYPICAL GARAGE WALL SECTION
NOT TO SCALE



CONCRETE FOUNDATION WALL
NOT TO SCALE



STAIR SECTION

BEISSER DESIGN SERVICES
3705 SE BEISSER DR.-GRIMES, IA 50111-ph 515-986-4422

WE ARE NOT STRUCTURAL OR CERTIFIED ENGINEERS. WE MAKE NO WARRANTIES OR REPRESENTATIONS EITHER EXPRESS OR IMPLIED TO THE STRUCTURAL PORTIONS OF THIS DESIGN. FOR QUESTIONS CONCERNING STRUCTURAL QUALITY AND STRENGTH PLEASE REFER THIS DRAWING TO A STRUCTURAL ENGINEER.

DRAWN BY:
A. LARSEN

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COSGRIFF DEVELOPMENT
1515-1517 MULBERRY ST, 2306-2308 CEDAR ST,
1519-1521 MULBERRY ST, 2324-2400 CHESTNUT ST,
2302-2304 CEDAR ST, 2320-2322 CHESTNUT ST,

GRANGER DUPLEXES

DATE
4-2-2021
REVISED
4-6/4-16-2021
7-1-2021

SCALE:
1/4" = 1'-0"

SHEET:
A13
SECTIONS

PLAN NO.
1128-21

VEENSTRA & KIMM, INC.
3000 Westown Parkway • West Des Moines, Iowa 50266-1320
515-225-8000 • 515-225-7848 (FAX) • 800-241-8000 (WATS)

September 2, 2021

Kyle Michel
City Administrator
City of Van Meter
505 Grant Street
P.O. Box 160
Van Meter, Iowa 50261-0160

CITY OF VAN METER
36093 TABOR ROAD
PLAT OF SURVEY

In response to your request, the writer has completed a review of the preliminary plat of survey for the Lacox Property at 36093 Tabor Road prepared by Larry Hyler of Bishop Engineering Company. The Plat of Survey reconfigures the three Lacox parcels into two parcels.

The Plat of Survey effectively combines parcels 1536100001 and 1525377001 into a single 56.81 acre parcel. However, the eastern portion of 1535377001 is not included in the new tract and effectively remains attached to parcel 1536100002. Likewise the southeast corner parcel of 153610001 is not part of the new parcel and effectively remains part of the adjoining 1536100002.

The Lacox property subject to the Plat of Survey is located in unincorporated Dallas County. The Plat of Survey is located within two miles of the City of Van Meter. The Plat of Survey is subject to the extraterritorial review jurisdiction of the City of Van Meter.

The City's review is to determine whether it will require compliance with some or all of the provisions of the subdivision ordinance or if it will wave the requirements of the subdivision ordinance.

The purpose of the compliance with the subdivision ordinance is to determine whether the City should require some of the public infrastructure normally associated with a subdivision. The public infrastructure includes streets, storm water drainage, sanitary sewer and water main.

For the creation of a single approximately 56.81 net acre parcel there are no provisions of the subdivision ordinance relative to infrastructure that would normally be required. Typically, the City would require compliance with the subdivision ordinance for the creation of a parcel that is ready for development as a single parcel or is being divided into parcels for purposes of development.

In this instance the writer would recommend the City waive compliance with the subdivision ordinance for this Plat of Survey subject to a certain condition. The condition is that any future development or the parcel is subject to the City's site plan ordinance and/or subdivision ordinance whether the property is developed as a single parcel or further divided, and the City reserve the right to require compliance with the subdivision ordinance as part of a future site plan or subdivision submittal.

If you have any questions or comments concerning the project, please contact the writer at 225-8000, or bveenstra@v-k.net.

VEENSTRA & KIMM, INC.

H. R. Veenstra Jr.

HRVJr:rdp
01-11

INDEX LEGEND
Location: NW 1/4 Section 36-T78N-R27W Dallas County, Iowa
& SW 1/4 Section 25-T78N-R27W
Owner : Wayne and Marcia Lacox
Surveyor: Larry D Hyler, PLS
Company: Bishop Engineering, 3501 104th St.
Urbandale, Ia 50322 (Ph) 515-276-0467

PROPERTY DESCRIPTION:

(TYPE DEED BOOK XXXX, PAGE XXXX)
XXXXXX
XXXXXX
XXXXXX

SUBJECT TO AND TOGETHER WITH ANY AND ALL EASEMENTS AND RESTRICTIONS OF RECORD.

SAID TRACT CONTAINS 113.49 ACRES (4,944,049 SQUARE FEET)

OWNER:

36093 TABOR ROAD
VAN METER, IOWA 50261

PREPARED FOR:

WAYNE AND MARCIA LACOX

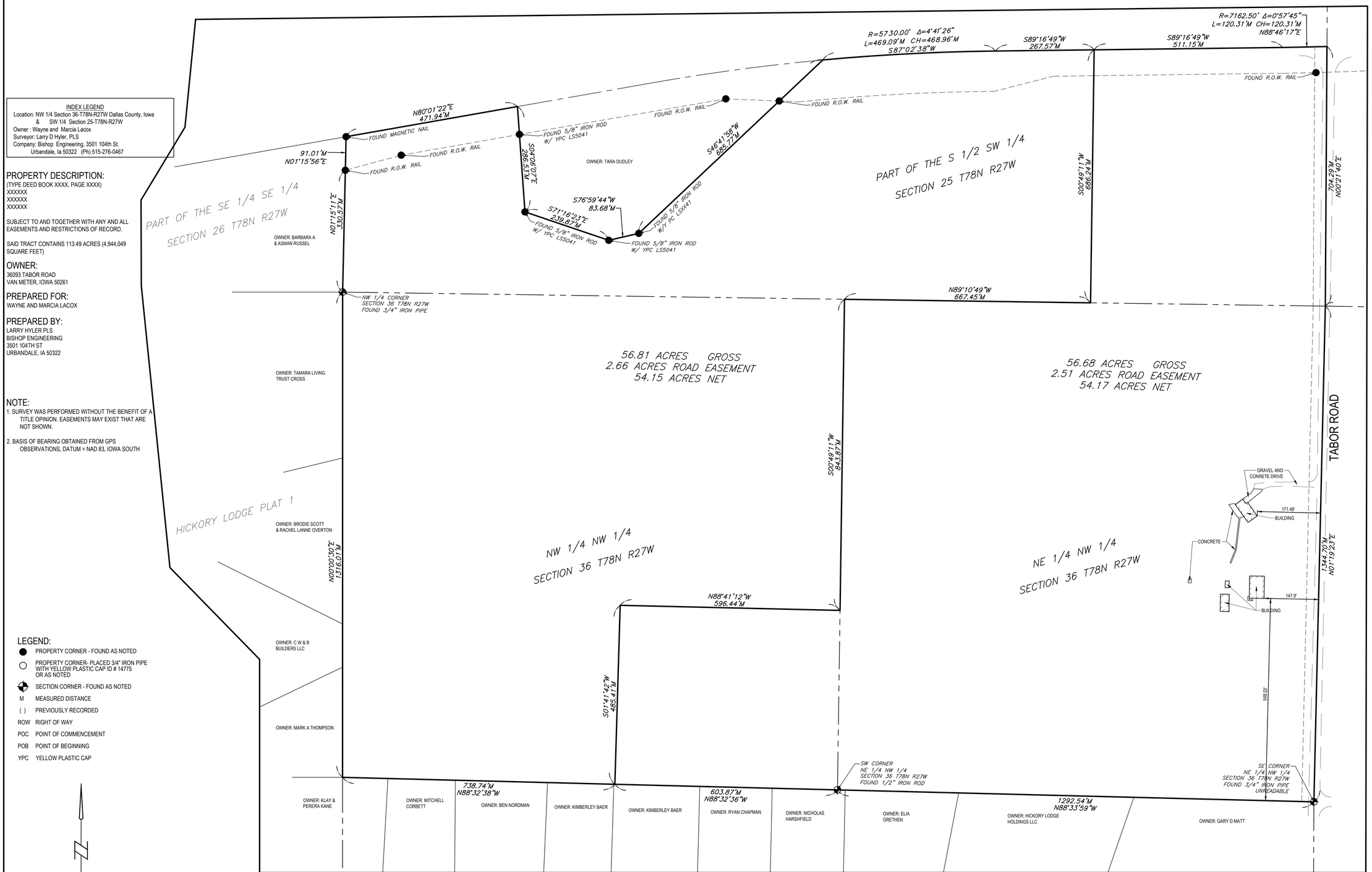
PREPARED BY:

LARRY HYLER PLS
BISHOP ENGINEERING
3501 104TH ST
URBANDALE, IA 50322

NOTE:

1. SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE OPINION. EASEMENTS MAY EXIST THAT ARE NOT SHOWN.

2. BASIS OF BEARING OBTAINED FROM GPS OBSERVATIONS, DATUM = NAD 83, IOWA SOUTH



LEGEND:

- ● PROPERTY CORNER - FOUND AS NOTED
- ○ PROPERTY CORNER- PLACED 3/4" IRON PIPE WITH YELLOW PLASTIC CAP ID # 14775 OR AS NOTED
- ⊕ SECTION CORNER - FOUND AS NOTED
- M MEASURED DISTANCE
- ( ) PREVIOUSLY RECORDED
- ROW RIGHT OF WAY
- POC POINT OF COMMENCEMENT
- POB POINT OF BEGINNING
- YPC YELLOW PLASTIC CAP

GRAPHIC SCALE
120 0 60 120
SCALE:1"= 120'

LICENSED PROFESSIONAL LAND SURVEYOR
LARRY D. HYLER, P.L.S.
No. 14775
IOWA

I HEREBY CERTIFY THAT THIS LAND SURVEYING DOCUMENT WAS PREPARED AND THE RELATED SURVEY WORK WAS PERFORMED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF IOWA.

SIGNED: PRELIMINARY DATE:
LARRY D. HYLER, P.L.S. 14775

LICENSE RENEWAL DATE: DEC. 31, 2022
PAGES OR SHEETS COVERED BY THIS SEAL: 1 OF 1

Bishop Engineering
"Planning Your Successful Development"
3501 104th Street
Des Moines, Iowa 50322-3825
Phone: (515)276-0467 Fax: (515)276-0217
Civil Engineering & Land Surveying Established 1959

PLAT OF SURVEY

36093 TABOR ROAD
VAN METER, IOWA 50261

REFERENCE NUMBER:

DRAWN BY: MDH

CHECKED BY:

REVISION DATE:

PROJECT NUMBER: 210391

SHEET NUMBER: 1 OF 1