



CPED STAFF REPORT

Prepared for the Board of Adjustment

BOA Agenda Item #2
January 8, 2015
BZZ-6903

LAND USE APPLICATION SUMMARY

Property Location: 3145 Dean Court
Project Name: Calhoun-Isles Condominium Association Fence
Prepared By: [Janelle Widmeier](#), Senior City Planner, (612) 673-3156
Applicant: Calhoun-Isles Condominium Association
Project Contact: Carolyn Wendell
Request: An open, decorative, ornamental fence on top of a retaining wall adjacent to 29th Street West.

Required Applications:

Variance	To increase the maximum height of an open, decorative, ornamental fence in a front yard adjacent to 29 th Street West from 4 feet to 7.5 feet.
-----------------	---

SITE DATA

Existing Zoning	R5 Multiple-Family District RIA Single-Family District (located only a small part of the site--approximately the far east 170 feet) SH Shoreland Overlay District (covers a very small part of the far east corner of the site and a larger part of the northwest corner of the site)
Lot Area	245,565 square feet
Ward(s)	7
Neighborhood(s)	Cedar-Isles-Dean Neighborhood Association
Designated Future Land Use	Urban Neighborhood
Land Use Features	Not applicable.
Small Area Plan(s)	Midtown Greenway Land Use and Development Plan

Date Application Deemed Complete	November 21, 2014	Date Extension Letter Sent	Not applicable
End of 60-Day Decision Period	January 20, 2015	End of 120-Day Decision Period	Not applicable

BACKGROUND

SITE DESCRIPTION AND PRESENT USE. The subject property is 245,565 square feet in area. The existing use is a planned unit development with townhouses and a multiple family dwelling. The PUD was approved in 1980. The site has frontage on 29th Street West and Dean Parkway.

SURROUNDING PROPERTIES AND NEIGHBORHOOD. The surrounding uses include the Midtown Greenway, low to high-density residential uses, commercial uses, a railroad corridor and parkland.

PROJECT DESCRIPTION. A fence and retaining wall are proposed to be constructed at the far east end of the property of 3145 Dean Court. The fence and retaining wall will extend approximately 110 feet adjacent to 29th Street West, and then they would extend approximately 30 feet toward the Midtown Greenway. The proposed fence would tie into an existing fence. The fence design consists of open, decorative, ornamental steel pickets and brick columns. Work was recently done in the area along 29th Street West and the Midtown Greenway by the Metropolitan Council for sanitary sewer improvements. The project boundaries extend into the subject site, and onto the Minneapolis Parks and Recreation Board property and Hennepin County Regional Railroad Authority property. The Metropolitan Council has worked with these 3 entities to develop the final site plan. The restoration phase of the project, including landscaping, grading, the retaining wall and fencing, needs to be completed. A front yard is required along 29th Street. The retaining wall would be entirely in the required front yard; however, it is a permitted obstruction because it retains natural grade. Where the fence would encroach into the required front yard, the maximum allowed height as measured from natural grade is 4 feet for an open, decorative, ornamental fence. The proposed fence would be up to 7.5 feet tall due to the grade change and the taller brick columns. A variance is required to increase the maximum height of a fence. Where the fence is located outside of the required front yard, the proposed fence height is allowed because it is of an open, decorative, ornamental design. Contrary to the applicant's statement of proposed use, a conditional use permit for development in the SH Overlay District is not necessary. The proposed fence and retaining wall is not located in the overlay district.

PUBLIC COMMENTS. As of writing this report, no correspondence from the neighborhood group has been received. Any correspondence received prior to the public meeting will be forwarded on to the Board of Adjustment for consideration.

ANALYSIS

VARIANCE

The Department of Community Planning and Economic Development has analyzed the application for a variance to increase the maximum height of an open, decorative, ornamental fence in a front yard adjacent to 29th Street West from 4 feet to 7.5 feet, based on the following [findings](#):

1. *Practical difficulties exist in complying with the ordinance because of circumstances unique to the property. The unique circumstances were not created by persons presently having an interest in the property and are not based on economic considerations alone.*

Practical difficulties exist in complying with the ordinance due to circumstances unique to the property. A front yard is required along 29th Street. An open, decorative, ornamental fence with steel pickets and brick columns is proposed in the required front yard. The proposed fence closely

resembles and will tie into the existing wrought iron fence with brick columns that is located adjacent to 29th Street. Both fences would be of the same height. The intent of the proposed fence design is to keep the architectural character of the existing wrought iron fence by providing a similar fence and to prevent trespassing between the Midtown Greenway and 29th Street West. The maximum allowed height of a fence located in a required front yard is 4 feet if constructed of open, decorative, ornamental fencing materials that are less than 60 percent opaque. The proposed fence would be up to 7.5 feet tall due to the grade changes along the street and the taller brick columns. The steel pickets would be 6 feet tall. The brick columns would be slightly taller with cast stone caps. To address the grade change, the fence segments will be stepped where it will be located over the retaining wall. The stepped wall results in a fence that is 7.5 tall at certain points. Once the fence turns towards the Greenway, a retaining wall is no longer needed and will follow the grade of the hill. Given the odd shape and grade changes of the site, the frontage along 29th Street is more like a corner side yard or a side yard next to an alley than a front yard. The fronts of the townhouses do not face the street and there is not a public sidewalk on the south side of 29th Street, which is a very narrow one-way street. Also, the primary fronts of structures across 29th Street face other streets. In a corner side yard, a fence can be up to 6 feet tall where it is located behind the principal structure. In an interior side yard, the proposed fence would be allowed to be up to 8 feet tall. The trespassing is also contributing to erosion issues. The Greenway embankment has eroded with the runoff from the trail and trampling of vegetation due to trespassers. There is trail access directly east of Dean Parkway; therefore the fence will assist in redirecting pedestrian traffic to the appropriate access point. These circumstances are unique to the property and have not been created by the applicant.

2. *The property owner or authorized applicant proposes to use the property in a reasonable manner that will be in keeping with the spirit and intent of the ordinance and the comprehensive plan.*

Fence regulations are established to promote the public health, safety and welfare, encourage an aesthetic environment and allow for privacy, while maintaining access to light and air. An open, decorative, ornamental fence with steel pickets and brick columns is proposed in the required front yard. The proposed fence closely resembles and will tie into the existing wrought iron fence with brick columns that is located adjacent to 29th Street. Both fences would be of the same height. The intent of the proposed fence design is to keep the architectural character of the existing wrought iron fence by providing a similar fence and to prevent trespassing between the Midtown Greenway and 29th Street West. The proposed fence would be up to 7.5 feet tall due to the grade changes along the street and the taller brick columns, but the height of the steel pickets would be 6 feet. The 29th Street right-of-way is more like an alley due to its narrow width and lack of a sidewalk adjacent to the subject property. The fence would be located 30 feet from Dean Parkway with dense plantings located in between. The property directly to the north of 29th Street and the proposed fence location is elevated above the street level by an approximately 4 foot tall retaining wall. For these reasons, the fence would not look like it is in a required front yard nor would it create a fortress-like feel. It would also not have any effect on surrounding properties access to light and air. The request is reasonable and would be in keeping with the spirit and intent of the ordinance and the comprehensive plan.

3. *The proposed variance will not alter the essential character of the locality or be injurious to the use or enjoyment of other property in the vicinity. If granted, the proposed variance will not be detrimental to the health, safety, or welfare of the general public or of those utilizing the property or nearby properties.*

The granting of the variance would not affect the character of the area or be injurious to the use or enjoyment of other property in the vicinity. The intent of the proposed fence design is to keep the

architectural character of the existing wrought iron fence by providing a similar fence and to prevent trespassing between the Midtown Greenway and 29th Street West. The proposed fence would be up to 7.5 feet tall due to the grade changes along the street and the taller brick columns, but the height of the steel pickets would be 6 feet. The 29th Street right-of-way is more like an alley due to its narrow width and lack of a sidewalk adjacent to the subject property. The fence would be located 30 feet from Dean Parkway with dense plantings located in between. The property directly to the north of 29th Street and the proposed fence location is elevated above the street level by an approximately 4 foot tall retaining wall. For these reasons, the fence would not look like it is in a required front yard nor would it create a fortress-like feel. It would also not have any effect on surrounding properties access to light and air. If granted, the proposed variance will not be detrimental to the health, safety or welfare of the public or those utilizing the property provided the proposed fence and retaining wall are constructed to current building codes.

FINDINGS REQUIRED BY THE MINNEAPOLIS CODE FOR DEVELOPMENT IN THE SHORELAND OVERLAY DISTRICT

1. *Prevention of soil erosion or other possible pollution of public waters, both during and after construction.*

The site is located between Lake Calhoun and Cedar Lake. The area where the fence and retaining wall are proposed is located outside of the overlay district. Erosion control, grading and landscaping plans have been developed for the larger project area and are attached for reference. One purpose of these plans is to address current erosion issues.

2. *Limiting the visibility of structures and other development from protected waters.*

The area between Lake Calhoun and Cedar Lake includes the Midtown Greenway, a low to high-density mix of uses, and park land. The proposed fence will not be located in the overlay district and will not be visible from the protected waters due to the existing development, topography and natural vegetation.

3. *The suitability of the protected water to safely accommodate types, uses and numbers of watercraft that the development may generate.*

This standard is not applicable for the proposed development.

RECOMMENDATIONS

Recommendation of the Department of Community Planning and Economic Development for the Variance:

The Department of Community Planning and Economic Development recommends that the Board of Adjustment adopt the above findings and **approve** the application for a variance to increase the maximum height of an open, decorative, ornamental fence in a front yard adjacent to 29th St W from 4 feet to 7.5 feet located at 3145 Dean Ct, subject to the following conditions:

1. Approval of the final site and elevation plans by the Department of Community Planning and Economic Development.

2. All site improvements shall be completed by January 8, 2017, unless extended by the Zoning Administrator, or the permit may be revoked for non-compliance.

ATTACHMENTS

1. Written description and findings submitted by applicant
2. Zoning map
3. Site survey
4. Site plan
5. Grading and erosion control plan
6. Landscaping plan
7. Fence and retaining wall elevations
8. Photos

Calhoun-Isles

Condominium Association

3141 Dean Court, Minneapolis, Minnesota 55416

September 25, 2014

Robert Clarksen
Minneapolis Development Review
300 Public Service Center
250 South Fourth Street
Minneapolis, MN 55414

Dear Mr. Clarksen

The Calhoun-Isles Condominium Association in conjunction with the Metropolitan Council wishes to submit this development plan for review by your office. Included is a variance application to construct a fence that exceeds the height requirements in the zoning code. The project also requires approval for a conditional use permit to develop within the Shoreland Overlay District.

The project follows work previously done to reconstruct Metropolitan Council Environmental Services sanitary sewer force mains along the Midtown Greenway Corridor and West 29th Streets in the Dean neighborhood of Minneapolis. Extensive use of the Midtown Greenway and adjacent parcels were needed to construct temporary and permanent sewer facilities. This project is to be completed by the Metropolitan Council to restore areas on public and private properties.

The proposed project includes landscape grading and planting of the site located at the southwest corner of Dean Parkway and West 29th Street. A fence extension that matches the existing fence along West 29th Street is proposed within the Association property. The Association property abuts the Hennepin County Regional Railroad Authority property to the south and Minneapolis Parks and Recreation Board Property to the east. The Metropolitan Council has developed this plan in approval with our Association and the two agencies.

The purpose of the project is to correct the erosion issues present at the site and prevent trespassing between the Midtown Greenway and West 29th Street across private property. The steep slope leading up to the former railroad embankment is undeveloped with uncontrolled soil erosion occurring due to the drainage of water off the regional trail and the trampling of vegetation due to trespassers. The site contains many invasive plant species. The trespassers are creating a hazardous condition to the trail users by not using the designated access ramp located to the east of Dean Parkway. Trespassers are also intruding on the private property containing residential housing.

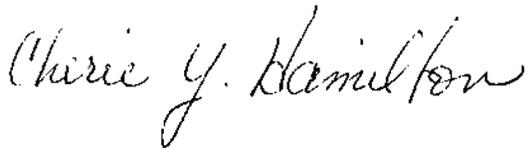
By extending the existing wrought iron fence along the Association property, trespassing will be limited. The proposed fence closely matches the existing fence materials. While the columns of the fence are similar in height to the existing fence, they exceed the maximum height in the code by approximately two feet. The fence keeps within the intent of the ordinance and the comprehensive plan by enhancing

the property and neighborhood. The proposed fence will improve safety to both the residents and the Midtown Greenway trail users.

The proposed landscaping plan reshapes the steep slope to evenly distribute water. The landscaping plan includes retaining walls, ground covers, shrubs and trees to stabilize the ground surface. All of these items will work together to reduce site erosion and protect the waters of the area. Many of the plants are native varieties to improve the character and maintainability of the site. In addition, the Metropolitan Council has developed a soil erosion control plan for review by City public works. These items meet the intent of the Shoreland Overlay conditional use requirements.

The Association is available to meet to facilitate the variance submission. We understand that fees are required by the City for review of this application and for acquiring mailing labels for public notice. If you could respond to Mr. Adam Gordon, (651) 602-4508, of the Metropolitan Council, we would most appreciate it.

Yours Truly,

A handwritten signature in cursive script that reads "Cherie Y. Hamilton". The signature is written in black ink and is positioned above the typed name and title.

Cherie Hamilton
Calhoun-Isles Condominium Association President

CC: Adam Gordon (MCES)
Andrew Gittleman (FirstService Residential Minnesota, Inc.)
Carol Shorrock (CICA)

Calhoun-Isles Condominium

7

NAME OF APPLICANT

WARD



PROPERTY ADDRESS
3145 Dean Court

FILE NUMBER
BZZ-6903

CONDOMINIUM NUMBER 284 CALHOUN-ISLES, A CONDOMINIUM

THESE FLOOR PLANS HAVE BEEN RECORDED AS PART OF THE
DECLARATION FILED AS DOCUMENT NO. 4658093
ON THE 21ST DAY OF JULY A.D., 1981, HENNEPIN
COUNTY RECORDER.

The undersigned, being first duly sworn under oath, certifies and deposes that these Floor Plans of Condominium No. 284, CALHOUN-ISLES, A condominium, being located upon

Lots C and D, West End Subdivision, Minneapolis, Minn. Also, that part of Park Siding lying South of the South line of West 29th Street and its extension West to the South-westerly boundary line of said Park Siding, according to the plat thereof on file and of record in and for Hennepin County, Minnesota,

fully and accurately depicts all information required by Minnesota Statutes Section 515A2-110.

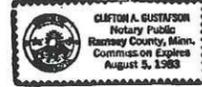
Dated this 18TH day of JULY, 1981.

J. Gary Ryan
J. Gary Ryan
Registered Land Surveyor
Minnesota Registration No. 11529

State of Minnesota) ss.
County of Ramsey)

The foregoing instrument was acknowledged before me this 18TH day of July, 1981 by J. Gary Ryan, a registered professional Land Surveyor.

Clifford Gustafson
Clifford Gustafson
Notary Public



Bruce Knutson, a registered professional Architect for the State of Minnesota pursuant to Minnesota Statutes Section 515A.2-101(b) does hereby certify that all structural components and mechanical systems serving more than one unit of all buildings containing or comprising any units hereby created are substantially completed consistent with the floor Plans for Condominium No. 284, CALHOUN-ISLES, A condominium.

Dated this 20 day of July, 1981

Bruce Knutson
Bruce Knutson
Registered Architect
Minnesota Registration No. 11789

State of Minnesota) ss.
County of Hennepin)

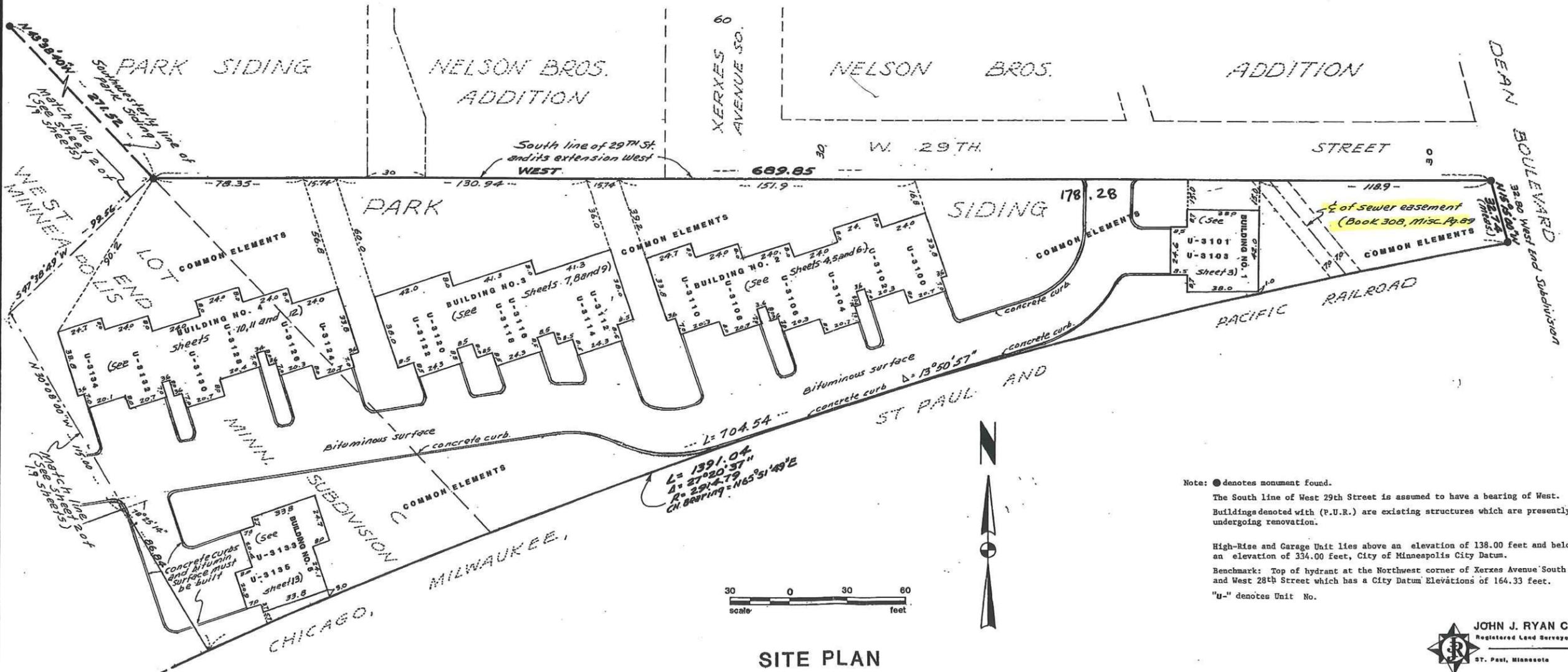
The foregoing instrument was acknowledged before me this 20th day of July, 1981 by Bruce Knutson, a registered professional Architect.

Rita Norman
Rita Norman
Notary Public
DAKOTA COUNTY
MINNESOTA
MY COMMISSION EXPIRES
JUNE 18, 1982



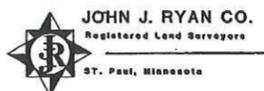
Condominium 284
Calhoun - Isles

FILE NO. 121

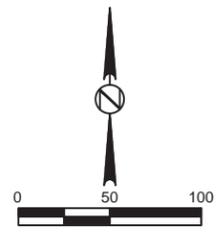
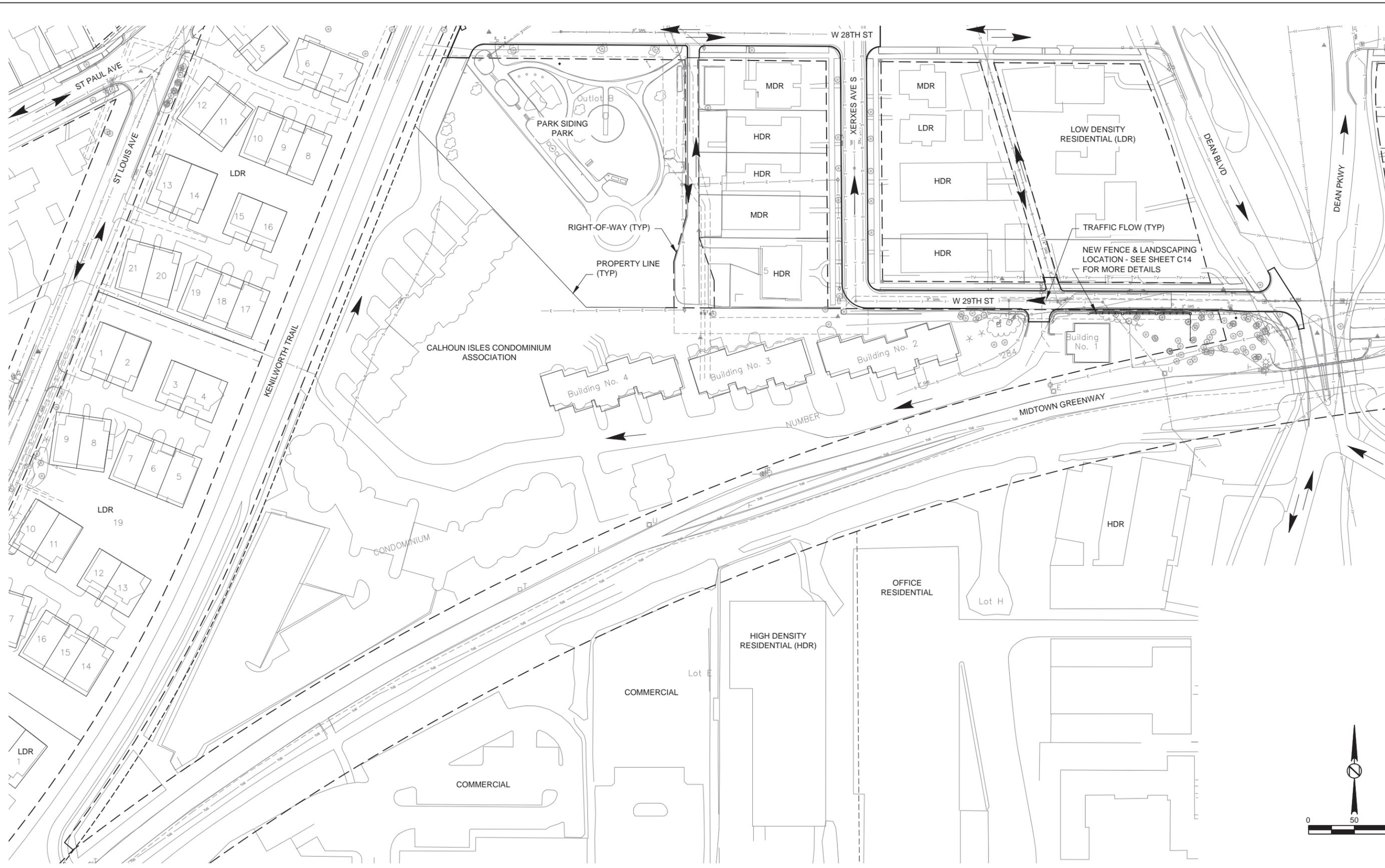


Note: ● denotes monument found.
The South line of West 29th Street is assumed to have a bearing of West.
Buildings denoted with (P.U.R.) are existing structures which are presently undergoing renovation.
High-Rise and Garage Unit lies above an elevation of 138.00 feet and below an elevation of 334.00 feet, City of Minneapolis City Datum.
Benchmark: Top of hydrant at the Northwest corner of Xerxes Avenue South and West 28th Street which has a City Datum Elevations of 164.33 feet.
"U-" denotes Unit No.

SITE PLAN



PLOTTED: 11/13/2014 8:20:11 AM
 MODIFIED: 11/13/2014 8:19:25 AM



C:\CDM\KRAFT\DRD\17359354\134XF\01.DWG

NO	DATE	BY	REVISIONS	REMARKS	NO	DATE	BY	REVISIONS	REMARKS
	7/19/13	WFL	ISSUED FOR APPLICATION						

DESIGNED WFL	CHECKED BFM	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: <i>William F. Lueck</i> TYPED OR PRINTED NAME: WILLIAM F. LUECK DATE: 7/19/13 REG NO: 40125
DRAWN DRK	APPROVED WFL	
DATE 7/19/13	CONSULTANT NO	

CDM Smith
 7650 Currell Blvd, Suite 300
 Woodbury, MN 55125
 Tel: (651) 252-3800

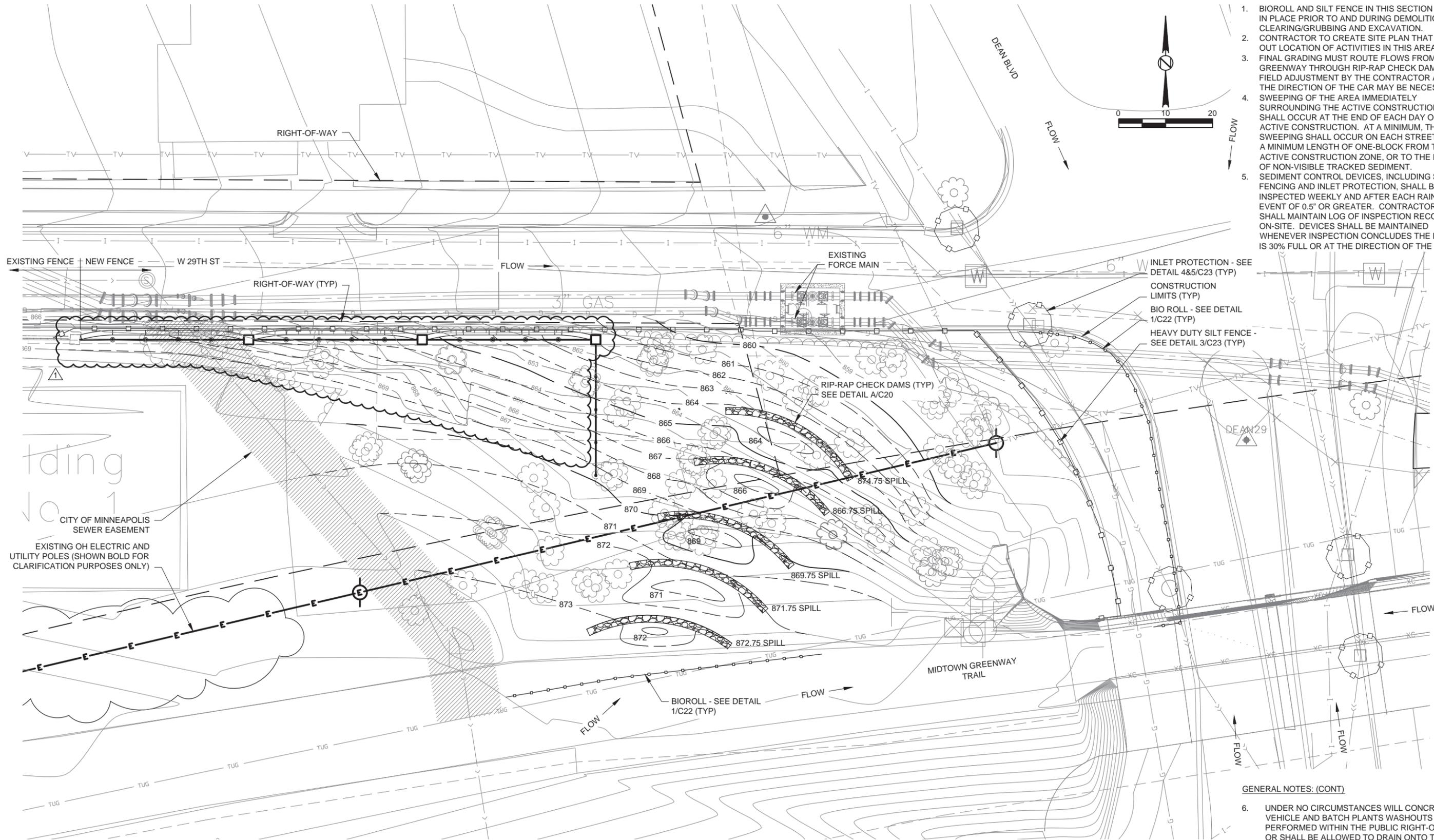
APPROVED RECORD DOCUMENT	
CONSULTING ENGR REP	DATE
MCES CONSTRUCTION DEPT REP	DATE
MCES ENGR DEPT REP	DATE

PROJECT	804134
CONTRACT	XXXXXX
FILE NAME	4134XFIG01

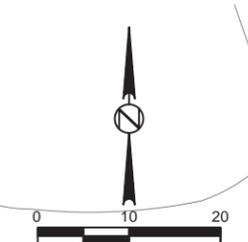
CALHOUN ISLES CONDOMINIUM ASSOCIATION
 PARK RESTORATION
 SITE PLAN
 FENCE PERMIT VARIANCE APPLICATION
 MINNEAPOLIS MINNESOTA

FIG 1
 1 of 1

PLOTTED: 11/13/2014 8:40:17 AM
 MODIFIED: 11/13/2014 8:39:52 AM



- GENERAL NOTES:**
1. BIOROLL AND SILT FENCE IN THIS SECTION TO BE IN PLACE PRIOR TO AND DURING DEMOLITION, CLEARING/GRUBBING AND EXCAVATION.
 2. CONTRACTOR TO CREATE SITE PLAN THAT LAYS OUT LOCATION OF ACTIVITIES IN THIS AREA.
 3. FINAL GRADING MUST ROUTE FLOWS FROM GREENWAY THROUGH RIP-RAP CHECK DAMS, FIELD ADJUSTMENT BY THE CONTRACTOR AND AT THE DIRECTION OF THE CAR MAY BE NECESSARY.
 4. SWEEPING OF THE AREA IMMEDIATELY SURROUNDING THE ACTIVE CONSTRUCTION ZONE SHALL OCCUR AT THE END OF EACH DAY OF ACTIVE CONSTRUCTION. AT A MINIMUM, THIS SWEEPING SHALL OCCUR ON EACH STREET FOR A MINIMUM LENGTH OF ONE-BLOCK FROM THE ACTIVE CONSTRUCTION ZONE, OR TO THE POINT OF NON-VISIBLE TRACKED SEDIMENT.
 5. SEDIMENT CONTROL DEVICES, INCLUDING SILT FENCING AND INLET PROTECTION, SHALL BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT OF 0.5" OR GREATER. CONTRACTOR SHALL MAINTAIN LOG OF INSPECTION RECORDS ON-SITE. DEVICES SHALL BE MAINTAINED WHENEVER INSPECTION CONCLUDES THE DEVICE IS 30% FULL OR AT THE DIRECTION OF THE CAR.



EXISTING FENCE + NEW FENCE
 W 29TH ST
 RIGHT-OF-WAY (TYP)
 CITY OF MINNEAPOLIS SEWER EASEMENT
 EXISTING OH ELECTRIC AND UTILITY POLES (SHOWN BOLD FOR CLARIFICATION PURPOSES ONLY)

INLET PROTECTION - SEE DETAIL 4&5/C23 (TYP)
 CONSTRUCTION LIMITS (TYP)
 BIO ROLL - SEE DETAIL 1/C22 (TYP)
 HEAVY DUTY SILT FENCE - SEE DETAIL 3/C23 (TYP)

- GENERAL NOTES: (CONT)**
6. UNDER NO CIRCUMSTANCES WILL CONCRETE VEHICLE AND BATCH PLANTS WASHOUTS BE PERFORMED WITHIN THE PUBLIC RIGHT-OF-WAY OR SHALL BE ALLOWED TO DRAIN ONTO THE PUBLIC RIGHT-OF-WAY OR STORM SEWER SYSTEM.

NO	DATE	BY	REVISIONS	REMARKS	NO	DATE	BY	REVISIONS	REMARKS
1	11/12/14	WFL	PCIM-002						
	10/10/14	WFL	CONFORMED DRAWING						
	7/28/14	WFL	ISSUED FOR BIDDING						

DESIGNED	WFL	CHECKED	BFM
DRAWN	DRK	APPROVED	WFL
DATE	7/28/14	CONSULTANT NO	40125

HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: *William F. Lueck*
 TYPED OR PRINTED NAME: WILLIAM F. LUECK
 DATE: 7/28/14 REG NO: 40125

GDM Smith
 7650 Currell Blvd, Suite 300
 Woodbury, MN 55125
 Tel: (651) 252-3800

APPROVED RECORD DOCUMENT	
CONSULTING ENGR REP	DATE
MCS CONSTRUCTION DEPT REP	DATE
MCS ENGR DEPT REP	DATE

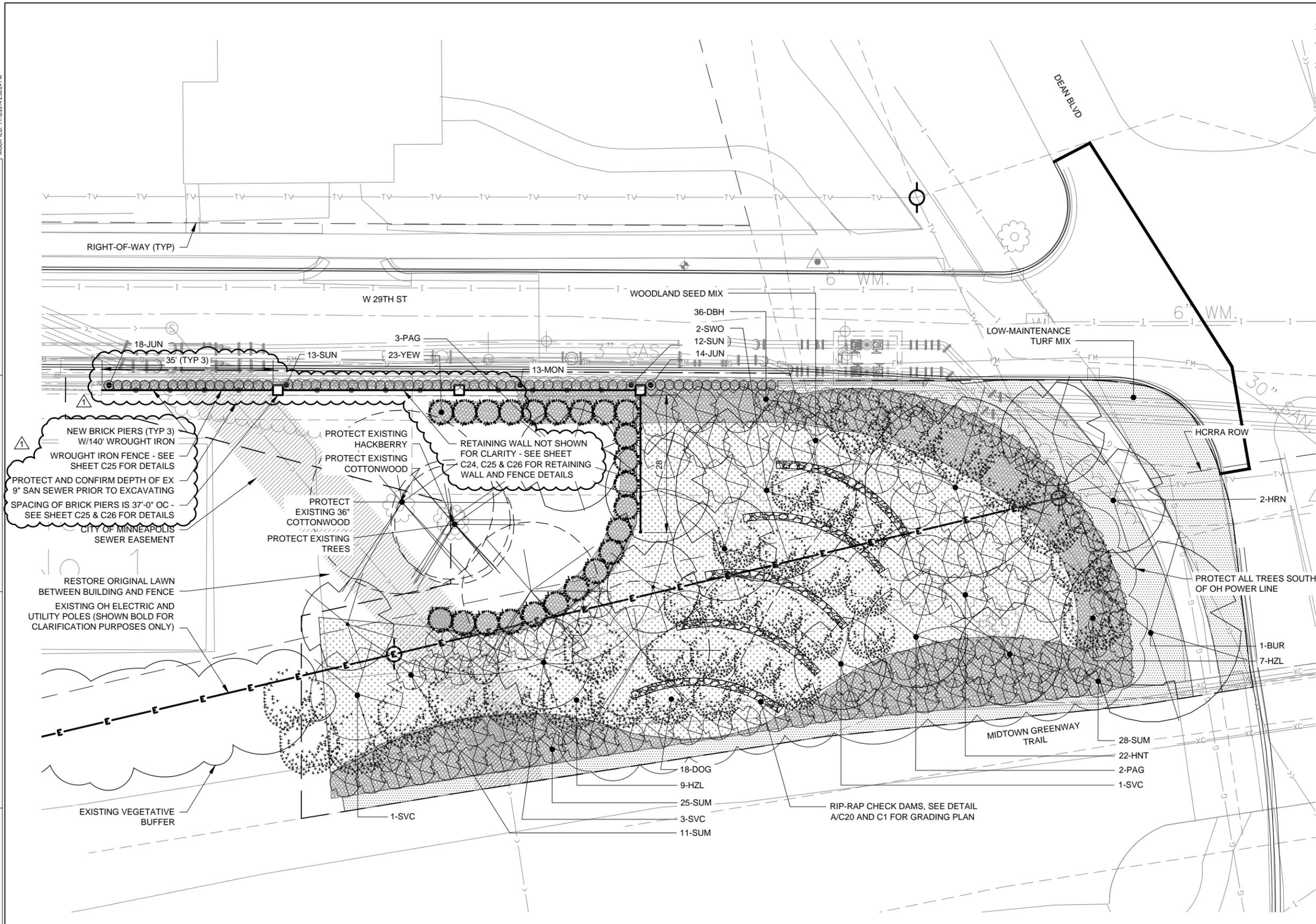
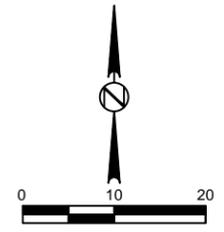
PROJECT	804134
CONTRACT	14P072
FILE NAME	4134C00001

PARK RESTORATION
 GRADING & EROSION CONTROL PLAN
 MINNEAPOLIS MINNESOTA

C:\CDM\KRAFT\DRD\12071174\134C00001.DWG

PLOTTED: 11/12/2014 2:30:48 PM
 MODIFIED: 11/12/2014 2:30:24 PM

- GENERAL NOTES:**
- SEE SPECIFICATION SECTION 02960 AND SHEET C19 FOR PLANT LIST.
 - PROTECT EXISTING CURB AND GUTTER, SANITARY SEWER AND FORCEMAIN DURING FENCE INSTALLATION.
 - THE SITE WILL REQUIRE ADDITIONAL TOPSOIL BORROW TO BE SPREAD AND APPLIED TO PLANTED AREAS.



NEW BRICK PIERS (TYP 3)
 W/140' WROUGHT IRON
 WROUGHT IRON FENCE - SEE
 SHEET C25 FOR DETAILS
 PROTECT AND CONFIRM DEPTH OF EX
 9" SAN SEWER PRIOR TO EXCAVATING
 SPACING OF BRICK PIERS IS 37'-0" OC -
 SEE SHEET C25 & C26 FOR DETAILS
 CITY OF MINNEAPOLIS
 SEWER EASEMENT

RETAINING WALL NOT SHOWN
 FOR CLARITY - SEE SHEET
 C24, C25 & C26 FOR RETAINING
 WALL AND FENCE DETAILS

RESTORE ORIGINAL LAWN
 BETWEEN BUILDING AND FENCE
 EXISTING OH ELECTRIC AND
 UTILITY POLES (SHOWN BOLD FOR
 CLARIFICATION PURPOSES ONLY)

	= HARDWOOD MULCH
	= WOODLAND SEED MIX
	= LOW MAINTENANCE SEED MIX

NO	DATE	BY	REVISIONS	REMARKS	NO	DATE	BY	REVISIONS	REMARKS
1	11/12/14	WFL	PCIM-002						
	10/10/14	WFL	CONFORMED DRAWING						
	7/28/14	WFL	ISSUED FOR BIDDING						

DESIGNED	MB	CHECKED	MB
DRAWN	MB	APPROVED	LPM
DATE	7/28/14	CONSULTANT NO	

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.
 SIGNATURE: *L. Peter MacDonagh*
 TYPED OR PRINTED NAME: L. PETER MACDONAGH
 DATE: 7/28/14 REG NO: 41051

KestrelDesignGroup
 7109 Ohms Lane
 Minneapolis, MN 55439
 T 952 928 9600
 F 952 224 9890
 W TheKestrelDesignGroup.com

APPROVED RECORD DOCUMENT

CONSULTING ENGR REP	DATE
MCES CONSTRUCTION DEPT REP	DATE
MCES ENGR DEPT REP	DATE

PROJECT	804134
CONTRACT	14P072
FILE NAME	4134C00014
MINNEAPOLIS	

PARK RESTORATION
 CICA LANDSCAPING PLANS - 1

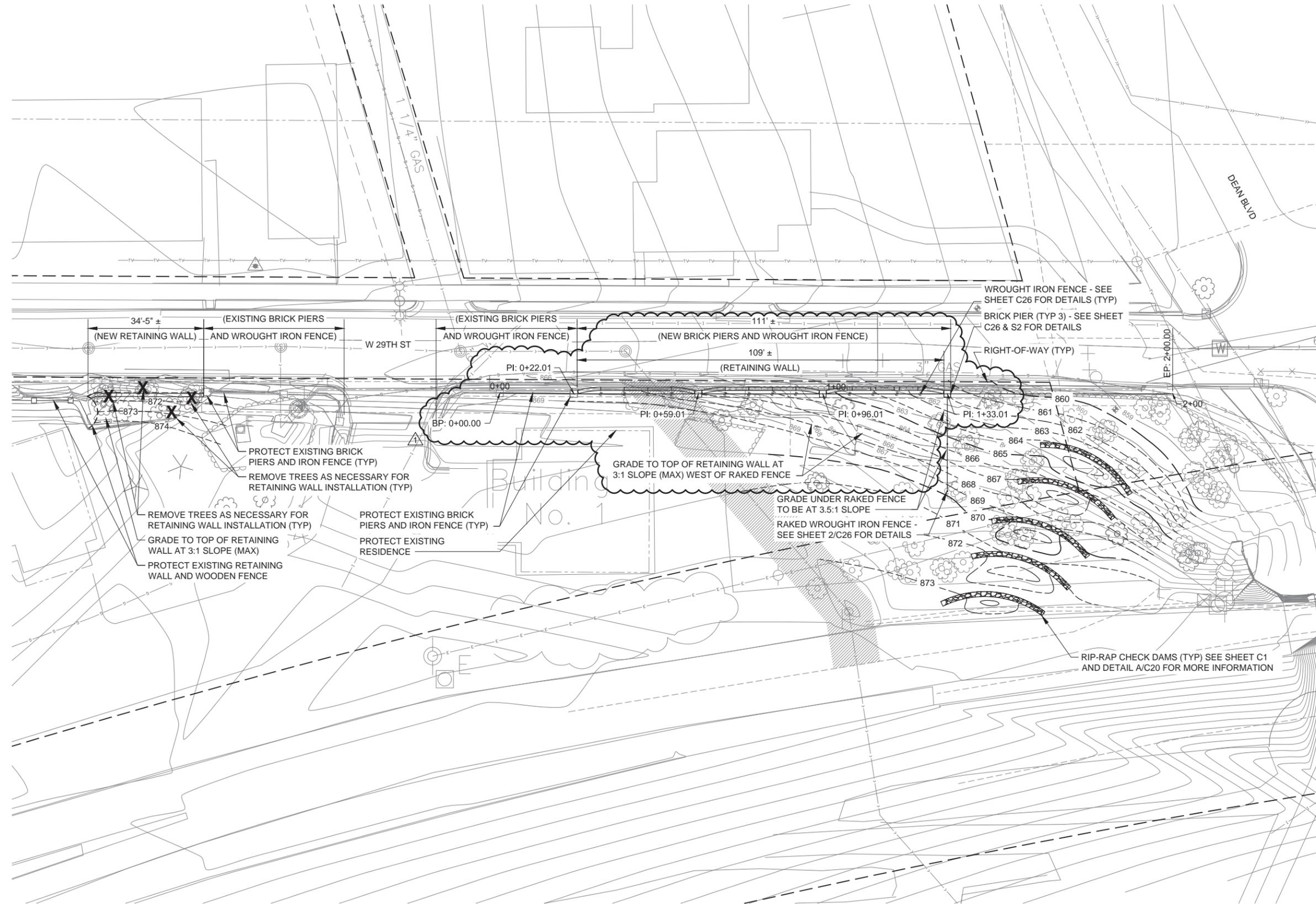
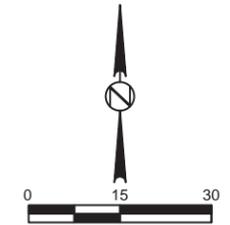
C14R

C:\CD\XMKRAFT\DRD\12071174\134C00014.DWG

PLOTTED: 11/13/2014 9:07:14 AM
 MODIFIED: 11/13/2014 9:08:17 AM

GENERAL NOTES:

1. PROTECT EXISTING CURB AND GUTTER AND FORCEMAIN DURING FENCE INSTALLATION.
2. THE SITE WILL REQUIRE ADDITIONAL TOPSOIL BORROW TO BE SPREAD AND APPLIED TO PLANTED AREAS.
3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE CAR IN WRITING TO OBTAIN THE CAR'S CLARIFICATION PRIOR TO COMMENCEMENT OF WORK.



PROTECT EXISTING BRICK PIERS AND IRON FENCE (TYP)
 REMOVE TREES AS NECESSARY FOR RETAINING WALL INSTALLATION (TYP)
 REMOVE TREES AS NECESSARY FOR RETAINING WALL INSTALLATION (TYP)
 GRADE TO TOP OF RETAINING WALL AT 3:1 SLOPE (MAX)
 PROTECT EXISTING RETAINING WALL AND WOODEN FENCE

PROTECT EXISTING BRICK PIERS AND IRON FENCE (TYP)
 PROTECT EXISTING RESIDENCE

GRADE TO TOP OF RETAINING WALL AT 3:1 SLOPE (MAX) WEST OF RAKED FENCE

GRADE UNDER RAKED FENCE TO BE AT 3.5:1 SLOPE
 RAKED WROUGHT IRON FENCE - SEE SHEET 2/C26 FOR DETAILS

RIP-RAP CHECK DAMS (TYP) SEE SHEET C1 AND DETAIL A/C20 FOR MORE INFORMATION

C:\CDM\KRAFT\DRD\12071174\134C00024.DWG

NO	DATE	BY	REVISIONS	REMARKS	NO	DATE	BY	REVISIONS	REMARKS
1	11/12/14	WFL	PCIM-002						
	10/10/14	WFL	CONFORMED DRAWING						
	7/28/14	WFL	ISSUED FOR BIDDING						

DESIGNED	WFL	CHECKED	BFM
DRAWN	DRK	APPROVED	WFL
DATE	7/28/14	CONSULTANT NO	

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DAILY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.
 SIGNATURE: *William F. Lueck*
 TYPED OR PRINTED NAME: WILLIAM F. LUECK
 DATE: 7/28/14 REG NO: 40125

CDM Smith
 7650 Currell Blvd, Suite 300
 Woodbury, MN 55125
 Tel: (651) 252-3800

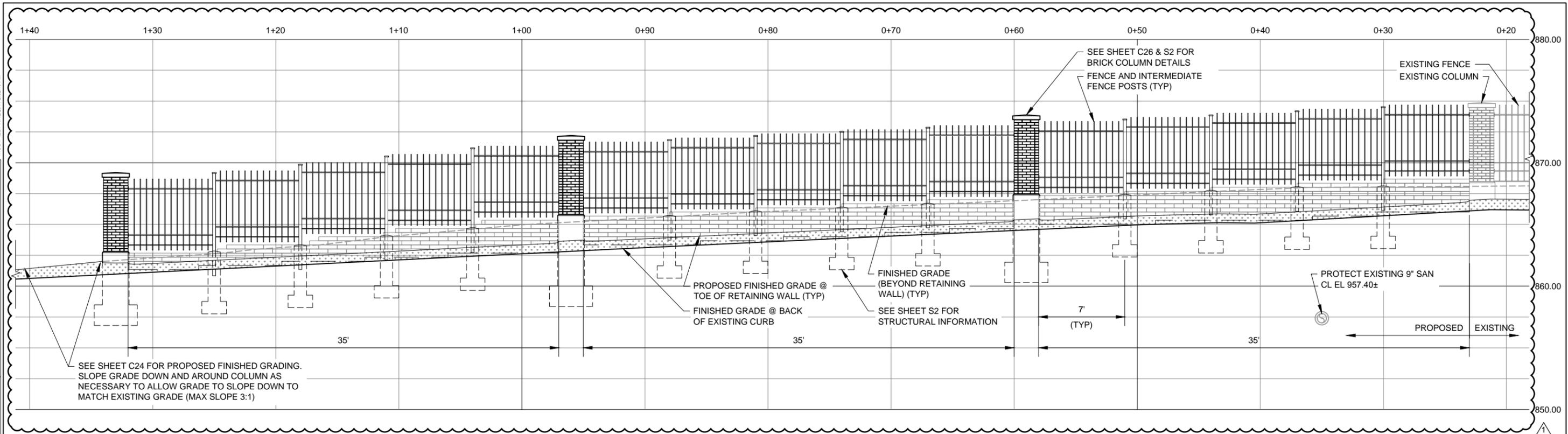
APPROVED RECORD DOCUMENT	
CONSULTING ENGR REP	DATE
MCES CONSTRUCTION DEPT REP	DATE
MCES ENGR DEPT REP	DATE

PROJECT	804134
CONTRACT	14P072
FILE NAME	4134C00024

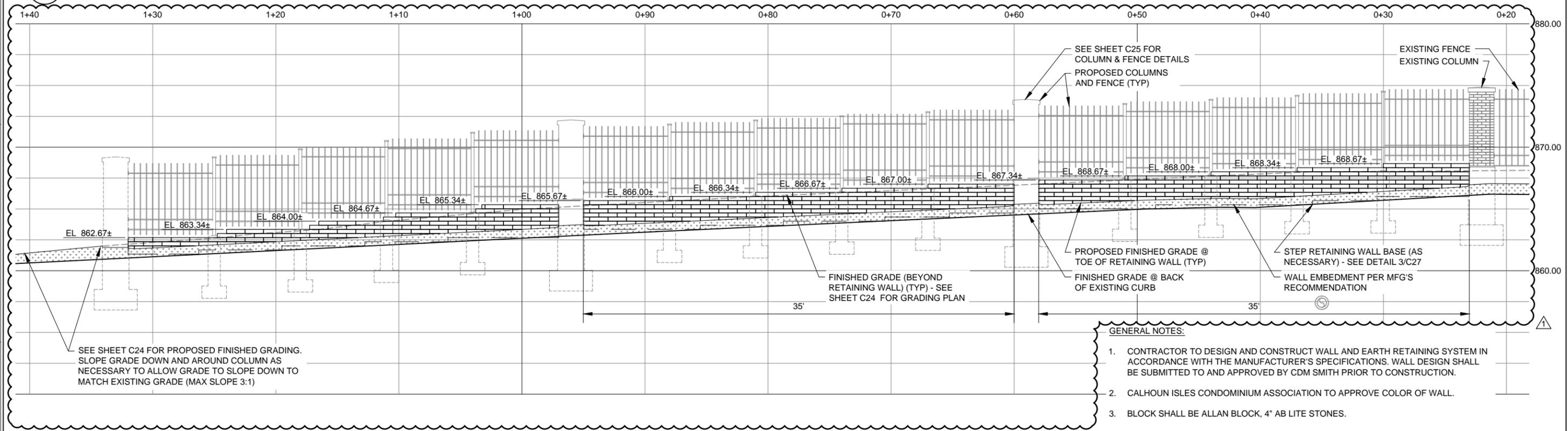
PARK RESTORATION
 FENCE AND RETAINING WALL PLAN
 MINNEAPOLIS MINNESOTA

C24R
 32 OF 37

PLOTTED: 11/12/2014 2:32:40 PM
 MODIFIED: 11/12/2014 2:32:19 PM



1 PARTIAL FENCE ELEVATION
 C25 1/4" = 1'-0"



2 RETAINING WALL ELEVATION
 C25 1/4" = 1'-0"

NO	DATE	BY	REVISIONS	REMARKS	NO	DATE	BY	REVISIONS	REMARKS
1	11/12/14	WFL	PCIM-002						
	10/10/14	WFL	CONFORMED DRAWING						
	7/28/14	WFL	ISSUED FOR BIDDING						

DESIGNED	WFL	CHECKED	BFM
DRAWN	DRK	APPROVED	WFL
DATE	7/28/14	CONSULTANT NO	

HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: *William F. Lueck*

TYPED OR PRINTED NAME: WILLIAM F. LUECK

DATE: 7/28/14 REG NO: 40125

CDM Smith
 7650 Currell Blvd, Suite 300
 Woodbury, MN 55125
 Tel: (651) 252-3800

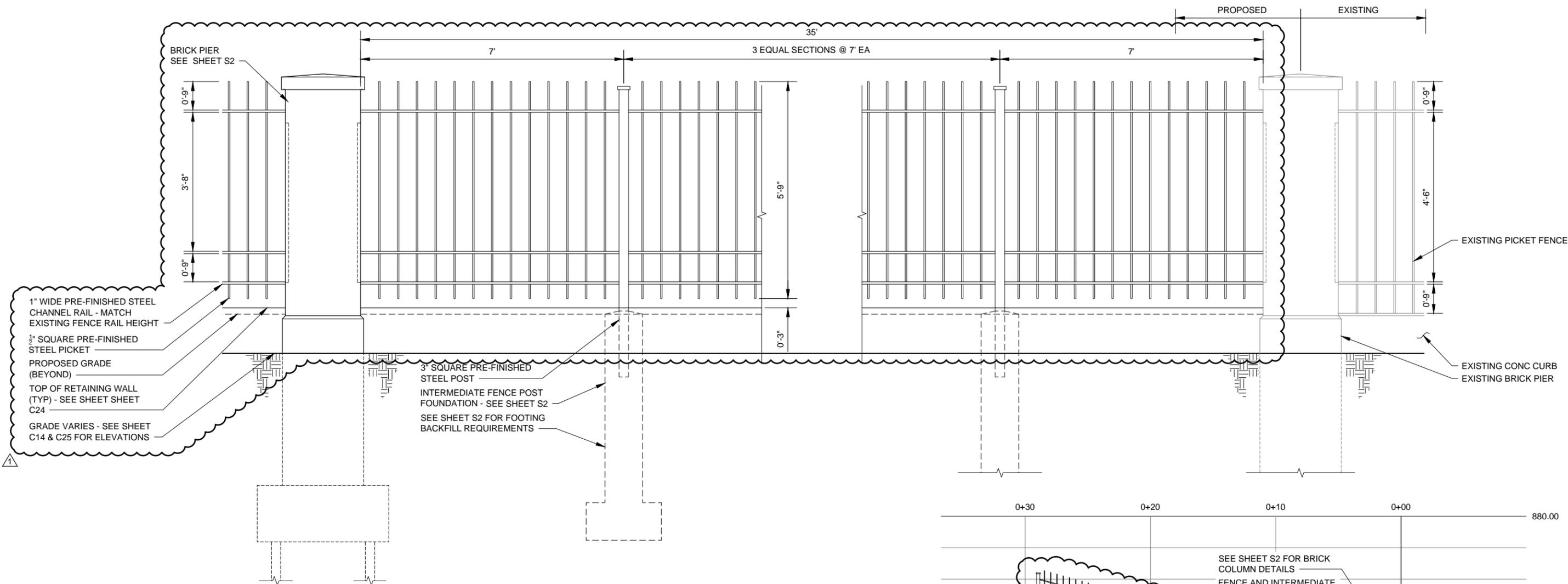
APPROVED RECORD DOCUMENT	
CONSULTING ENGR REP	DATE
MCES CONSTRUCTION DEPT REP	DATE
MCES ENGR DEPT REP	DATE

PROJECT	804134
CONTRACT	14P072
FILE NAME	4134C00025

PARK RESTORATION
FENCE AND RETAINING WALL ELEVATIONS
 MINNEAPOLIS MINNESOTA

C:\CDM\KRAFT\DRD\12071174\134C00025.DWG

PLOTTED: 11/12/2014 2:36:42 PM
 MODIFIED: 11/12/2014 2:38:31 PM



1
 C26
TYPICAL FENCE ELEVATION
 3/4" = 1'-0"

ORNAMENTAL PICKET FENCE

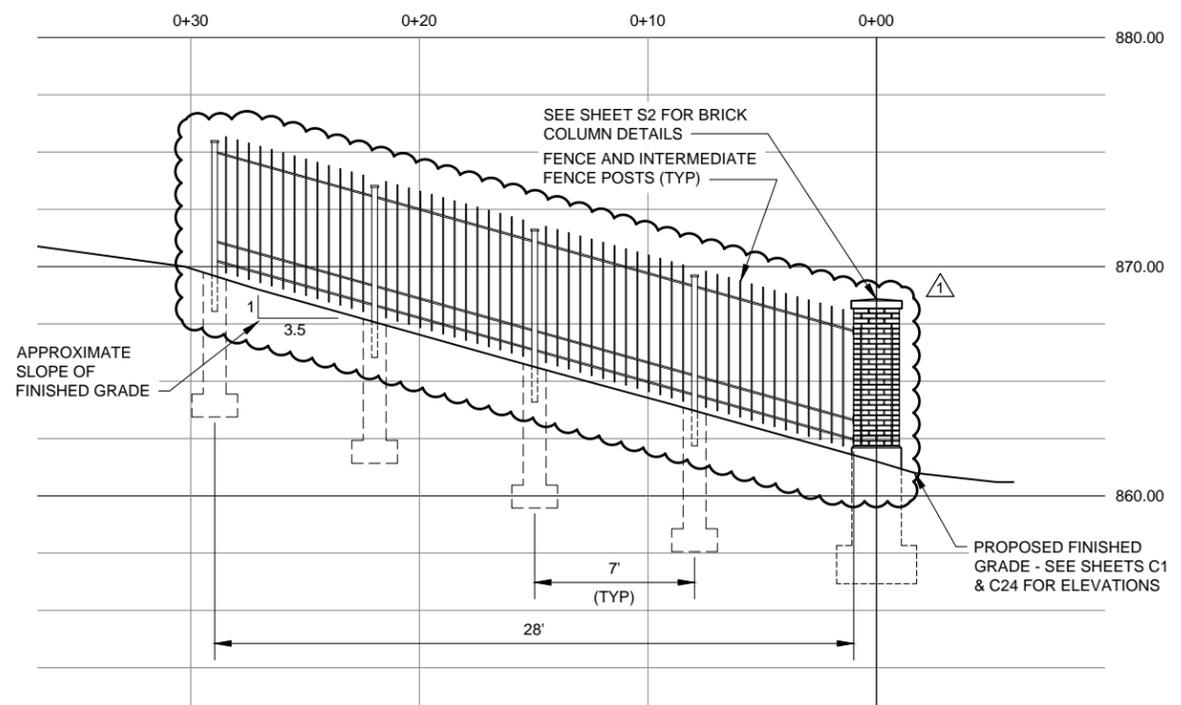
- A. PICKETS: SQUARE SOLID BAR, ASTM A36, HOT ROLLED STRUCTURAL QUALITY STEEL, HOT DIPPED GALVANIZED. 60,000 PSI TENSILE STRENGTH, AND 36,000 PSI YIELD STRENGTH.
 - A.A. PICKET SIZE: MATCH EXISTING. SPACING: MATCH EXISTING
 - A.B. SHOP WELD EACH PICKET TO EACH RAIL. GRIND SMOOTH.
- B. RAILS: HORIZONTAL 'U' CHANNELS, ASTM A36, HOT ROLLED STRUCTURAL QUALITY STEEL, G-60 GALVANIZED COATING PER ASTM A787. 60,000 PSI TENSILE STRENGTH, AND 36,000 PSI YIELD STRENGTH. RAILS TO BE MECHANICALLY PUNCHED TO RECEIVE PICKETS.
 - B.A. RAIL SIZE: MATCH EXISTING.
- C. POSTS: GALVANIZED STEEL TUBE MEMBERS, ASTM 5000, GRADE BG-60 GALVANIZED COATING PER ASTM A787. 58,000 PSI TENSILE STRENGTH, AND 42,000 PSI YIELD STRENGTH.
 - C.A. POST SIZE: MATCH EXISTING.
- D. FINISH: ALL POSTS, CAPS, AND FENCE PANELS SHALL BE POLYESTER COATED INDIVIDUALLY AFTER FABRICATION. THOROUGHLY COAT ALL SURFACES. COMPONENTS ARE GIVEN A TRIGLYCIDYL ISOCYANURATE (TGIC) POLYESTER RESIN POWDER COATING APPLIED BY ELECTROSTATIC SPRAY TO 3 MIL THICKNESS. BAKE FINISH FOR 15 MINUTES AT A TEMPERATURE OF 400 DEGREES FAHRENHEIT.
 - D.A. COLOR: MATCH EXISTING

- E. POST CAPS: FORMED STEEL WEATHER TIGHT CLOSURE WITH FLAT TOP.

- F. RAIL BRACKETS: STANDARD 1 1/2" x 1 1/2" x 1 1/2", 11 GA STEEL CHANNELS. FASTEN BRACKET TO POST WITH ONE GALVANIZED HEX BOLT. ATTACH RAILS TO BRACKET WITH ONE WAY SECURITY FASTENER.

GENERAL NOTES:

- 1. CONTACT GOPHER STATE ONE CALL AT 1-800-252-1166 PRIOR TO ANY EXCAVATION OR PLANTING.



2
 C26
RAKED FENCE ELEVATION
 1/4" = 1'-0"

NO	DATE	BY	REVISIONS	REMARKS	NO	DATE	BY	REVISIONS	REMARKS
1	11/12/14	WFL	PCIM-002						
	10/10/14	WFL	CONFORMED DRAWING						
	7/28/14	WFL	ISSUED FOR BIDDING						

DESIGNED	WFL	CHECKED	BFM
DRAWN	DRK	APPROVED	WFL
DATE	7/28/14	CONSULTANT NO	

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 SIGNATURE: *William F. Lueck*
 TYPED OR PRINTED NAME: WILLIAM F. LUECK
 DATE: 7/28/14 REG NO: 40125

GDM Smith
 7650 Currell Blvd, Suite 300
 Woodbury, MN 55125
 Tel: (651) 252-3800

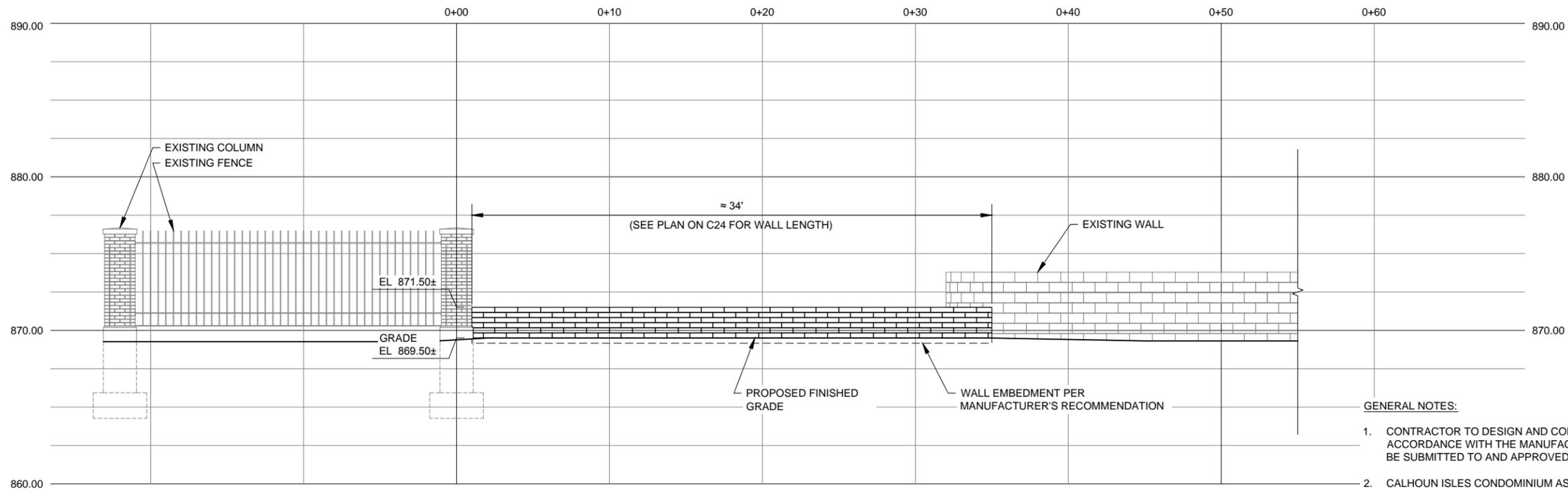
APPROVED RECORD DOCUMENT	
CONSULTING ENGR REP	DATE
MCES CONSTRUCTION DEPT REP	DATE
MCES ENGR DEPT REP	DATE

PROJECT	804134
CONTRACT	14P072
FILE NAME	4134C00026

PARK RESTORATION
WROUGHT IRON FENCE DETAILS
 MINNEAPOLIS MINNESOTA

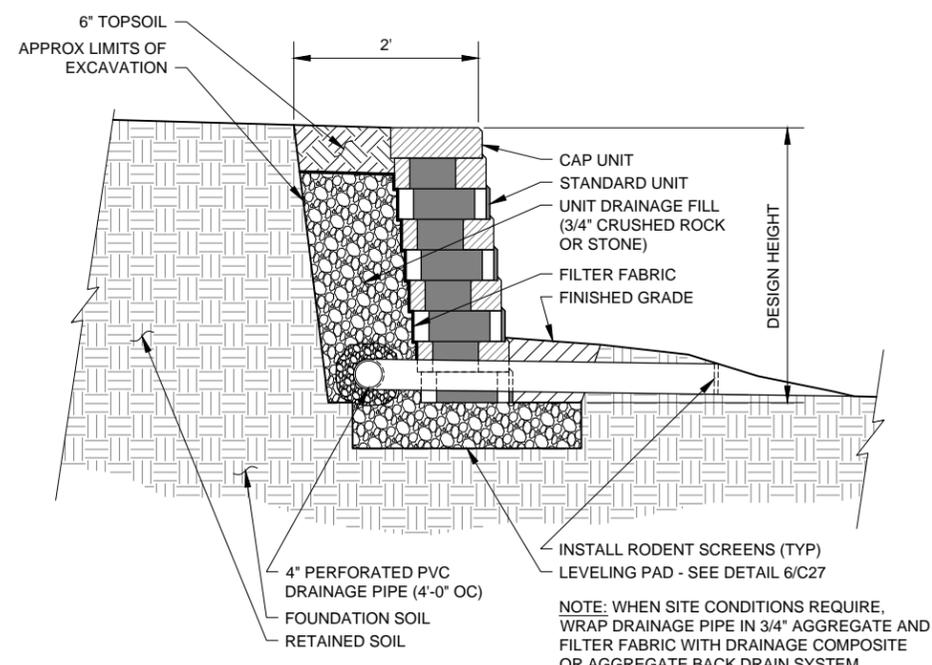
C:\CDM\KRAFT\DRD\12071174\13-4C00026.DWG

PLOTTED: 8/14/2014 9:30:03 AM
 MODIFIED: 8/14/2014 9:32:22 AM

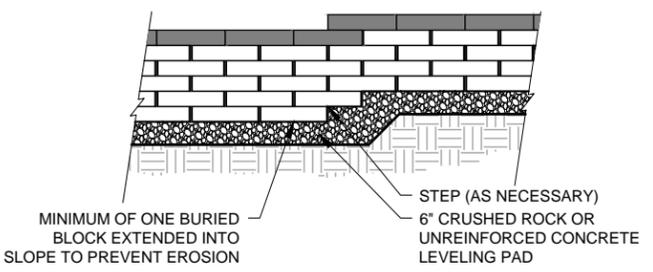


- GENERAL NOTES:**
- CONTRACTOR TO DESIGN AND CONSTRUCT WALL AND EARTH RETAINING SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. WALL DESIGN SHALL BE SUBMITTED TO AND APPROVED BY CDM SMITH PRIOR TO CONSTRUCTION.
 - CALHOUN ISLES CONDOMINIUM ASSOCIATION TO APPROVE COLOR OF WALL.
 - BLOCK SHALL BE ALLAN BLOCK, 4" AB LITE STONES.

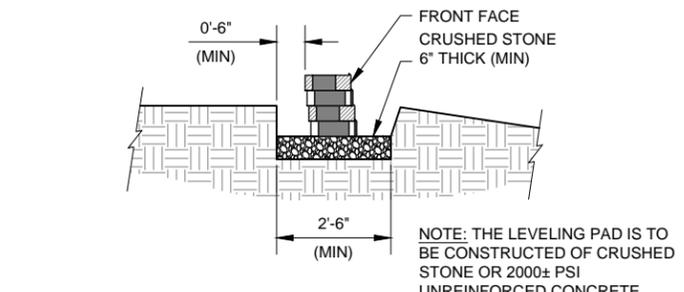
1 RETAINING WALL ELEVATION
 1/4" = 1'-0"



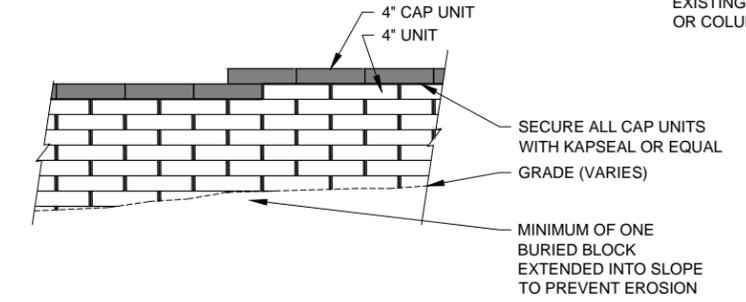
2 TYPICAL RETAINING WALL SECTION
 NOT TO SCALE



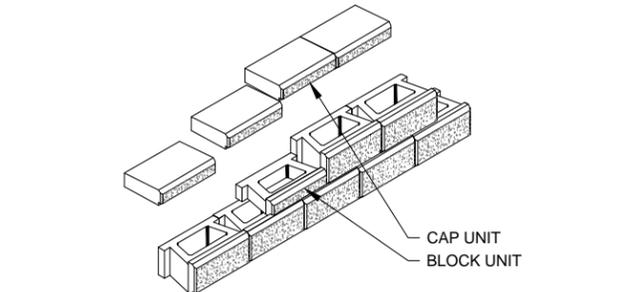
3 RETAINING WALL PAD ELEVATION
 NOT TO SCALE



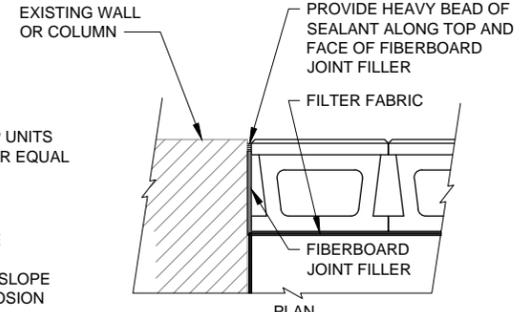
6 LEVELING PAD SECTION
 NOT TO SCALE



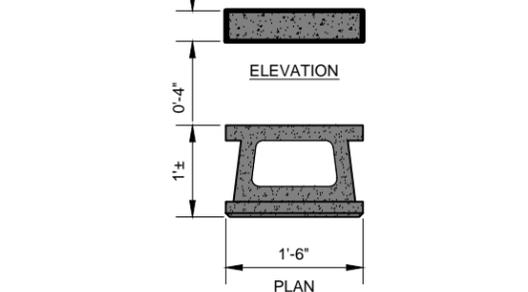
4 RETAINING WALL CAP ELEVATION
 NOT TO SCALE



7 RETAINING WALL ISOMETRIC
 NOT TO SCALE



5 ABUTTING EX STRUCTURE
 NOT TO SCALE



8 RETAINING WALL BLOCK
 1" = 1'-0"

C:\CDM\KRAFT\DRD\12071174\13-4C00027.DWG

NO	DATE	BY	REVISIONS	REMARKS	NO	DATE	BY	REVISIONS	REMARKS
	7/28/14	WFL	ISSUED FOR BIDDING						

DESIGNED WFL	CHECKED BFM	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: <i>William F. Lueck</i> TYPED OR PRINTED NAME: WILLIAM F. LUECK DATE: 7/28/14 REG NO: 40125
DRAWN DRK	APPROVED WFL	
DATE 7/28/14	CONSULTANT NO	

CDM Smith
 7650 Currell Blvd., Suite 300
 Woodbury, MN 55125
 Tel: (651) 252-3800

APPROVED RECORD DOCUMENT	
CONSULTING ENGR REP	DATE
MCES CONSTRUCTION DEPT REP	DATE
MCES ENGR DEPT REP	DATE

PROJECT 804134
CONTRACT 14P072
FILE NAME 4134C00027

PARK RESTORATION
RETAINING WALL ELEVATION & DETAILS
 MINNEAPOLIS MINNESOTA

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA:

CODES:

2007 MINNESOTA STATE BUILDING CODE (MSBC) AND IBC-2006 (INTERNATIONAL BUILDING CODE)
 ACI 318-05 (BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE)
 ASCE 7-05 (MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES)

DESIGN LOADS:

DEAD LOADS: CALCULATED FOR STRUCTURE SELF WEIGHT

BUILDING OCCUPANCY CATEGORIES:

OCCUPANCY CATEGORY II

SNOW:

GROUND SNOW LOAD P_g 50 PSF
 IMPORTANCE FACTOR $I_s = 1.00$

WIND DESIGN DATA:

BASIC WIND SPEED 90 MPH (3 SECOND GUST)

EXPOSURE CATEGORY C

IMPORTANCE FACTOR $I_w = 1.00$

SEISMIC DESIGN DATA:

NO SEISMIC PROVISIONS REQUIRED PER 2007 MSBC, MINNESOTA RULES, CHAPTER 1305, SUBPART 4.

FOR GEOTECHNICAL INFORMATION REFER TO "GEOTECHNICAL REVIEW OF BRICK COLUMN FOUNDATIONS FOR FENCE, MCES HOPKINS FORGE MAIN PROJECT, MINNEAPOLIS, MINNESOTA DATED MARCH 11, 2013 BY AMERICAN ENGINEERING TESTING INC. (AET) PROJECT NO. 01-05741

FOUNDATIONS:

FOUNDATIONS ARE DESIGNED FOR ALLOWABLE SOIL PRESSURE = 1,500 PSF

EXTERIOR FOUNDATION SYSTEMS SHALL EXTEND TO A MINIMUM DEPTH OF 6"

GENERAL CONDITIONS:

STANDARD DETAILS SHALL BE USED AT ALL APPLICABLE LOCATIONS, UNLESS NOTED OTHERWISE ON DRAWINGS

WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED SIZES.

CONSTRUCTION NOTES:

THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.

THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED, TO BRACING AND SHORING FOR LOADS DUE TO HYDROSTATIC, EARTH, WIND OR SEISMIC FORCES, CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

CONTRACTOR SHALL INVESTIGATE THE SITE DURING CLEARING AND EARTH WORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, UTILITIES, ETC. IF ANY SUCH STRUCTURES ARE FOUND, THE OWNERS REPRESENTATIVE SHALL BE NOTIFIED IMMEDIATELY.

BACKFILL MATERIALS AND TECHNIQUE SHALL FOLLOW THE GEOTECHNICAL ENGINEERS RECOMMENDATIONS.

PRIOR TO INSTALLATION OF FENCE COMPONENTS, COORDINATE AND CONFIRM THE ANCHORAGE REQUIREMENTS WITH THE MANUFACTURER. THE ANCHORAGE SYSTEM SHALL NOT DAMAGE THE CONCRETE OR MASONRY.

DEFERRED SUBMITTALS

THE FOLLOWING PORTIONS OF THE PROJECT ARE DEFERRED SUBMITTAL ITEMS & HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD:

- STEEL FENCE AND CONNECTION TO COLUMNS.
- STEEL HELICAL PIERS.

DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND INDICATED THAT THEY HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE STRUCTURE.

DEFERRED SUBMITTALS SHALL BE PREPARED AND STAMPED BY A LICENSED CIVIL OR STRUCTURAL PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MINNESOTA.

CAST-IN-PLACE CONCRETE:

ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318 'BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE', AND ACI 301 'SPECIFICATIONS FOR STRUCTURAL CONCRETE'.

MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS:
 STRUCTURAL CONCRETE $f_c = 4,000$ PSI WITH W/C < 0.44.

CEMENT: ASTM C150, TYPE I OR II, WITH 560 LBS MIN OF CEMENTITIOUS CONTENT (CEMENT + FLY ASH).

CONCRETE MIXES MAY CONTAIN FLY ASH. THE FLY ASH SHALL CONFORM TO ASTM C618 CLASS F AND THE LOSS OF IGNITION SHALL BE LIMITED TO 3%. THE ADDITION RATE SHALL NOT EXCEED 25% OF THE CEMENT WEIGHT.

ALL AGGREGATE SHALL BE ASTM C33, WITH NO. 57 COARSE AGGREGATE.

REINFORCING STEEL SHALL BE BILLET STEEL CONFORMING TO THE LATEST EDITION OF ASTM A615, GRADE 60.

REINFORCING STEEL FABRICATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CRSI MANUAL OF STANDARD PRACTICE.

MINIMUM CONCRETE COVER SHALL BE TO NEAREST EXPOSED SURFACE.

ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE 3/4" CHAMFER, UNLESS OTHERWISE NOTED.

WALL REINFORCEMENT AT CORNERS OR JUNCTIONS OF WALLS SHALL BE CONTINUOUS OR LAPPED PER THE STANDARD DETAILS. LAP SPLICES SHALL CONFORM WITH THE TABLE ON THIS SHEET.

STIRRUP SUPPORT BARS SHALL BE PROVIDED AS REQUIRED TO SECURE TOP BARS AGAINST DISPLACEMENT.

UNLESS OTHERWISE INDICATED ON THE DRAWINGS, CONCRETE COVER OVER #11 AND SMALLER REINFORCING BARS SHALL BE AS FOLLOWS:

FOOTINGS AND SLABS ON GRADE:
 - FORMED CONCRETE SURFACES 2"
 - AT UNFORMED CONCRETE SURFACES CAST AGAINST THE SOIL OR AGAINST CONCRETE WORK MATS 3"

CURE CONCRETE TO RETAIN MOISTURE AND MAINTAIN A TEMPERATURE OF AT LEAST 50° F AT THE CONCRETE SURFACE FOR A MINIMUM OF SEVEN DAYS AFTER PLACEMENT. WATER CURING, SHEET MATERIAL CURING AND LIQUID MEMBRANE CURING IS ACCEPTABLE.

DURING COLD WEATHER CONCRETE SHALL BE BATCHED, DELIVERED, PLACED, CURED AND PROTECTED IN COMPLIANCE WITH THE RECOMMENDATIONS OF ACI 308R. DO NOT USE SALT, MANURE OR OTHER CHEMICALS FOR COLD WEATHER PROTECTION.

DURING HOT WEATHER CONCRETE SHALL BE BATCHED, DELIVERED, PLACED, CURED AND PROTECTED IN COMPLIANCE WITH THE RECOMMENDATIONS OF ACI 305R. THE TEMPERATURE OF THE CONCRETE SHALL BE SUCH THAT IT WILL CAUSE NO DIFFICULTIES FROM LOSS OF SLUMP, FLASH SET OR COLD JOINTS. IMMEDIATELY COVER PLASTIC CONCRETE WITH SHEET CURING MATERIAL DURING HOT WEATHER.

POST INSTALLED CONCRETE ANCHORS SHALL HAVE CURRENT ICC EVALUATION SERVICE REPORTS THAT INDICATE THE ANCHORS ARE ADEQUATE TO RESIST SEISMIC LOADS IN CRACKED CONCRETE.

CONCRETE JOINTS:

CONSTRUCTION JOINTS SHALL NOT BE PLACED AT LOCATIONS OTHER THAN THOSE SHOWN ON THE DRAWINGS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.

LAP SPlice AND DEVELOPMENT LENGTHS:

BAR SIZE	LAP SPlice WITH 2" COVER		TENSION DEVELOPMENT LENGTH WITH 2" COVER	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
3	16	16	12	12
4	20	16	15	12
5	24	19	19	15
6	29	22	22	17
7	42	33	33	25
8	48	37	37	29
9	60	46	46	36
10	74	57	57	44
11	89	68	68	53

TABLE IS BASED ON ACI 318-05

MINIMUM BAR SPACING = 6" O.C.

A TOP BAR IS A HORIZONTAL BAR WHERE MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST DIRECTLY BELOW THE BAR, WHERE HORIZONTAL WALL REINFORCEMENT IS UNIFORMLY SPACED IN A VERTICAL PLANE AT 12 INCH MAXIMUM SPACING, LENGTHS MAY BE AS FOR "OTHER BARS".

LAP SPlice & DEVELOPMENT LENGTHS FOR BEAMS AND COLUMNS SHALL BE CLASS B TENSION SPlice LENGTHS AS REQUIRED BY ACI 318.

BAR LAP SPlice LOCATIONS FOR GRAVITY LOADS:

ALL BOTTOM BARS MAY BE SPliced AT SUPPORT ONLY.

BARS AT THE TOP MAY BE SPliced AT CENTER OF SPAN ONLY.

WHEN MULTIPLE BARS ARE SPliced AT THE SAME SECTION, THE CLEAR BAR SPACING IS THE MINIMUM CLEAR DISTANCE BETWEEN THE BARS OUTSIDE THE SPlice LENGTH LESS ONE BAR DIAMETER.

UNLESS OTHERWISE INDICATED ON THE DRAWINGS, THE BARS AT A LAP SPlice SHALL BE IN CONTACT WITH EACH OTHER.

STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL."

ALL WELDING SHALL COMPLY WITH A.W.S. STANDARD D1.1 LATEST EDITION. ALL WELDS SHALL BE PAINTED WITH A RUST PREVENTIVE PAINT.

ALL STRUCTURAL STEEL CONNECTIONS NOT DETAILED OR OTHERWISE NOTED SHALL BE STANDARD A.I.S.C. BOLTED OR A.I.S.C. WELDED.

TYPICAL METALS:

STRUCTURAL STEEL:

SHAPES - W AND WT: ASTM A992 ($F_y = 50$ KSI)
 SHAPES - S, M HP, C, MC, L, PLATE AND BAR: ASTM A36 ($F_y = 36$ KSI)
 HOLLOW STRUCTURAL SECTIONS:
 ROUND: ASTM A500, GRADE B ($F_y = 42$ KSI)
 SQUARE AND RECTANGULAR: ASTM A500, GRADE B ($F_y = 46$ KSI)
 ANCHOR RODS: ASTM F1554, 3/4" MINIMUM ($F_y = 36$ KSI) WITH HEAVY HEX NUTS
 WELDING ELECTRODES: E70XX ($F_t = 70$ KSI)
 ASSEMBLY BOLTS: HIGH STRENGTH ASTM A325-N

ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE BY MANUFACTURER AND HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123.

STRUCTURAL STEEL SHALL BE HOT DIPPED GALVANIZED PER ASTM A123.

SEE NOTES ON DRAWINGS FOR INDIVIDUAL STRUCTURES FOR DETAILED OR SPECIAL REQUIREMENTS.

MISCELLANEOUS METALS:

FASTENERS FOR ALUMINUM CONSTRUCTION SHALL BE TYPE 316 OR 304 STAINLESS STEEL, UNLESS NOTED OTHERWISE.

ALL ANGLE FRAMES ARE TO BE MITERED AND WELDED OR MOLDED AT CORNERS.

MASONRY:

MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE MASONRY, $f_m = 1500$ psi

HOLLOW, LOAD-BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, NORMAL WEIGHT UNITS.

CLAY MASONRY FACE BRICK SHALL CONFORM TO ASTM C216 WITH AN AVERAGE NET-AREA COMPRESSIVE STRENGTH OF 3,350 PSI, INITIAL RATE OF ABSORPTION LESS THAN 30 G/SQ. IN. PER ASTM C87, THAT HAS BEEN TESTED IN ACCORDANCE WITH ASTM C67 AND IS RATED "NOT EFFLORESCED", AND MATCHES THE SIZE AND COLOR OF ADJACENT BRICK FENCE COLUMNS TO REMAIN. SUBMIT TWO (2) SAMPLES OF PROPOSED BRICK TO CAR FOR APPROVAL PRIOR TO CONSTRUCTION.

MORTAR FOR REINFORCED MASONRY SHALL CONFORM TO ASTM C270, TYPE S, UNLESS OTHERWISE NOTED. GROUT SHALL CONFORM TO ASTM C476.

PREFABRICATED HORIZONTAL JOINT REINFORCEMENT SHALL CONFORM TO ASTM A951, HOT-DIP GALVANIZED, MINIMUM WIRE SIZE OF 0.187-INCHES, AND SHALL BE PROVIDED AT VERTICAL SPACING OF 16 INCHES ON CENTER, UNLESS OTHERWISE NOTED. DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.

SPECIAL INSPECTION REQUIREMENTS

SPECIAL INSPECTIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.

IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17 OF THE BUILDING CODE, THE CONTRACTOR WILL PROVIDE QUALIFIED PERSONNEL TO PERFORM THE FOLLOWING SPECIAL INSPECTIONS AND SHALL FURNISH INSPECTION REPORTS FROM THE SPECIAL INSPECTOR TO THE ENGINEER AND BUILDING OFFICIAL. THIS DOES NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY TO PERFORM THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR 24 HOURS IN ADVANCE OF ALL INSPECTIONS.

THE FOLLOWING ITEMS, AS A MINIMUM, SHALL RECEIVE SPECIAL INSPECTION:

- INSPECTION FOR HELICAL PILE FOUNDATION CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 1704.8 OF THE 2006 IBC AND THE SPECIFICATIONS.
- INSPECTION FOR CAST-IN-PLACE CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 1704.4 AND TABLE 1704.4 OF THE 2006 IBC AND THE SPECIFICATIONS.
- POST INSTALLED ANCHORS INSTALLED IN CONCRETE CONSTRUCTION (1704.4): THE SPECIAL INSPECTOR SHALL VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE COMPRESSIVE STRENGTH, PREDRILLED HOLE DIMENSIONS, ANCHOR SPACING, EDGE DISTANCES, SLAB THICKNESS AND ANCHOR EMBEDMENT. THE INSPECTOR SHALL VERIFY ANCHOR INSTALLATION HAS BEEN PERFORMED IN COMPLIANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS AND THE APPROPRIATE ICC EVALUATION SERVICE REPORT.
- STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY OR UNDER THE DIRECTION OF A REGISTERED DESIGN PROFESSIONAL, IN ACCORDANCE WITH SECTION 1709 OF THE 2006 IBC AND THE CONSTRUCTION DOCUMENTS.

ABBREVIATIONS:

&	AND	fc	CONCRETE COMPRESSION STRESS	OC	ON CENTER
@	AT	fm	MASONRY PRISM STRESS	OD	OUTSIDE DIAMETER
Ø	DIAMETER	FAB	FABRICATE (OR) (ED)	OF	OUTSIDE FACE
#	NUMBER	FD	FLOOR DRAIN	OPNG	OPENING
AB	ANCHOR BOLT	FDN	FOUNDATION	OPP	OPPOSITE
ABV	ABOVE	FF	FAR FACE	OPP HD	OPPOSITE HAND
ADDL	ADDITIONAL	FHMS	FLATHEAD MACHINE SCREW	OPT	OPTIONAL
AGG	AGGREGATE	FHWS	FLATHEAD WOOD SCREW	PCF	POUNDS PER CUBIC FOOT
AL	ALUMINUM	FIN	FINISH (ED)	PJF	PREMOLDED JOINT FILLER
ALT	ALTERNATE (ING)	FL	FLOOR	RQR PL	PLATE
APPROX	APPROXIMATE (LY)	FLG	FLANGE (ED)	PLYWD	PLYWOOD
ARCH	ARCHITECT (URAL) (URE)	FRP	FIBERGLASS REINFORCED PLASTIC	PRCST	PRECAST
B TO B	BACK TO BACK	FT	FEET/FOOT	PREFAB	PRE-FABRICATED
BEV	BEVEL (ED)	FTG	FOOTING/FITTING	PSF	POUNDS PER SQUARE FOOT
BLK	BLOCK	GA	GAGE	PSI	POUNDS PER SQUARE INCH
BLKG	BLOCKING	GALV	GALVANIZED	PVMT	PAVEMENT
BOT	BOTTOM	GI	GALVANIZED IRON	R	RISER (S)
BRG	BEARING	GLB	GLASS BLOCK	RAD	RADIUS
C TO C	CENTER TO CENTER	GR	GRADE	RC	REINFORCED CONCRETE
CIRC	CIRCUMFERENTIAL	GRGT	GRATING	REF	REFERENCE/REFER
CJ	CONSTRUCTION JOINT	HAS	HEADED ANCHOR STUD	REINF	REINFORCE (D) (ING) (MENT)
CL OR CL	CENTERLINE	HD	HEAVY DUTY	REQD	REQUIRED
CLJ	CONTROL JOINT	HDR	HEADER	REV	REVISION
CLR	CLEAR	HOR	HORIZONTAL	RLG	RAILING
CMU	CONCRETE MASONRY UNITS	HP	HIGH POINT	RO	ROUGH OPENING
COL	COLUMN	HR	HANDRAIL	RT	RIGHT
COMP	COMPRESSIBLE	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	SCHED	SCHEDULE
CONC	CONCRETE	IAW	IN ACCORDANCE WITH	SCJ	SLAB CONTROL JOINT
CONN	CONNECTION	ID	INSIDE DIAMETER	SECT	SECTION
CONT	CONTINUOUS	IF	INSIDE FACE	SFR	SYNTHETIC FIBER REINFORCED
CPLG	COUPLING	IN	INCH	SIM	SIMILAR
CRS	COURSE (S)	INT	INTERIOR	SP	SPACE (S) (D)
CSK	COUNTERSINK	INT	INTERIOR	SPEC	SPECIFICATION/SPECIFIED
CTG	COATING	INVT	INVERT	SQ	SQUARE
CTR	CENTER (ED)	JT	JOINT	SST	STAINLESS STEEL
d	PENNEY	KO	KNOCKOUT	STD	STANDARD
DET	DETAIL	L	ANGLE DESIGNATION OR LENGTH	STIF	STIFFENER
DIA	DIAMETER	LH	LONG LEG HORIZONTAL	STR	STIRRUP (S)
DIAG	DIAGONAL	LLV	LONG LEG VERTICAL	SYM	SYMMETRICAL
DIR	DIRECTION	LNTL	LINTEL	T	TREAD (S)
DL	DEAD LOAD	LOC	LOCATION/LOCATED	T&B	TOP AND BOTTOM
DO	DITTO	LONG	LONGITUDINAL	TF	TOP FACE
DWG	DRAWING	LP	LOW POINT	THD	THREADED
DWL	DOWEL	LT	LEFT	THK	THICK (NESS)
EA	EACH	LW	LIGHTWEIGHT	TOC	TOP OF CONCRETE
EB	EXPANSION BOLT	MAS	MASONRY	TOS	TOP OF STEEL
EF	EACH FACE	MATL	MATERIAL	TOW	TOP OF WALL
EL	ELEVATION	MAX	MAXIMUM	TRNSV	TRANSVERSE
ELEC	ELECTRIC (AL)	MB	MACHINE BOLTS	TYP	TYPICAL
EMBED	EMBEDMENT	MCJ	MASONRY CONTROL JOINT	UNO	UNLESS NOTED OTHERWISE
EQ	EQUAL (LY)	MECH	MECHANICAL	VB	VAPOR BARRIER
EQPT	EQUIPMENT	MFD	MANUFACTURED	VERT	VERTICAL
ES	EACH SIDE	MFG	MANUFACTURING	W	WIDE FLANGE
EW	EACH WAY	MFR	MANUFACTURER	W	WITH
EXP JT	EXPANSION JOINT	MIN	MINIMUM	W/O	WITHOUT
EXST	EXISTING	MISC	MISCELLANEOUS	WP	WORKING POINT
EXT	EXTERIOR	MO	MASONRY OPENING	WS	WATERSTOP
		NF	NEAR FACE	WWF	WELDED WIRE FABRIC
		NSG	NON-SHRINK GROUT		
		NTS	NOT TO SCALE		

ABBREVIATION NOTES:

ABBREVIATIONS AND DESIGNATIONS FOR STEEL MEMBERS MAY BE FOUND IN THE CURRENT MANUAL OF STEEL CONSTRUCTION BY AISC

ABBREVIATIONS OF TECHNICAL SOCIETIES AND TRADE ASSOCIATIONS MAY BE FOUND IN THE SPECIFICATIONS

WELDING SYMBOLS AND ABBREVIATIONS MAY BE FOUND IN AWS 2.4.

STRUCTURAL LEGEND:

	EARTH FILL		STEEL		GRANULAR FILL
	UNDISTURBED EARTH		ALUMINUM		SAND
	CONCRETE		GRATING		GROUT
	CONCRETE MASONRY		CHECKERED PLATE		SHALE
	CLAY				

NO	DATE	BY	REMARKS	NO	DATE	BY	REMARKS
	05/12/14	WFL	ISSUED FOR BIDDING				

DESIGNED AV	CHECKED BRM	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: <i>Brian R. McKee</i> TYPED OR PRINTED NAME: BRIAN R. MCKEE DATE: 05/12/14 REG NO: 44163
DRAWN MG	APPROVED WFL	
DATE 05/12/14	CONSULTANT NO	

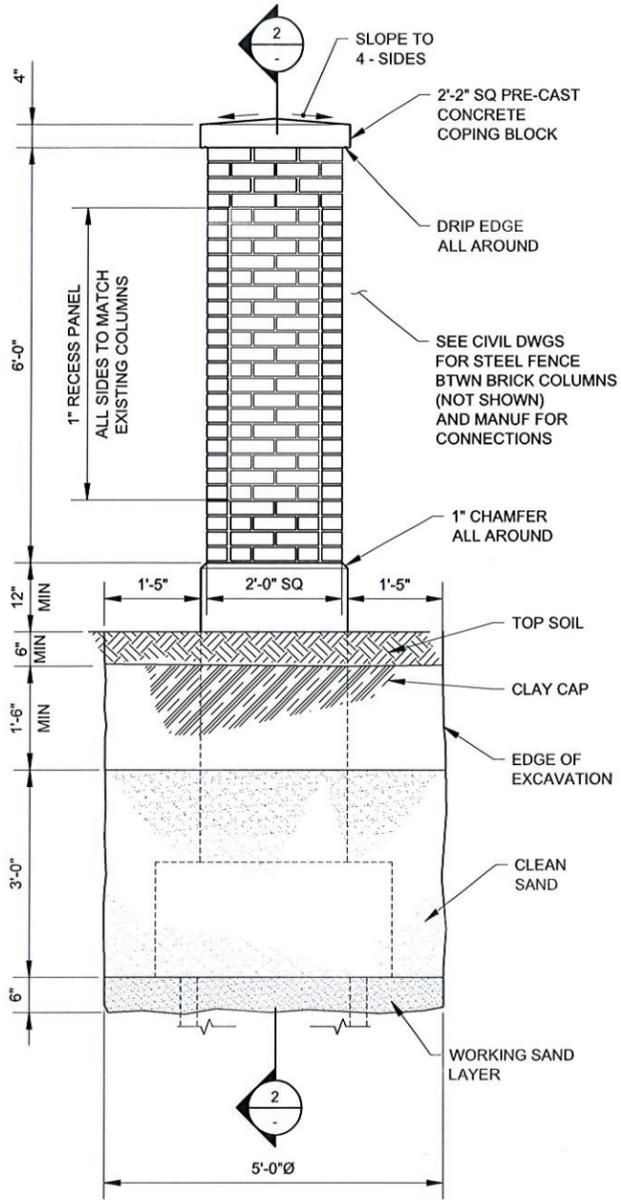
CDM Smith
 7650 Cornell Blvd, Suite 300
 Woodbury, MN 55125
 Tel: (651) 252-3800

APPROVED RECORD DOCUMENT	
CONSULTING ENGR REP	DATE
MCES CONSTRUCTION DEPT REP	DATE
MCES ENGR DEPT REP	DATE

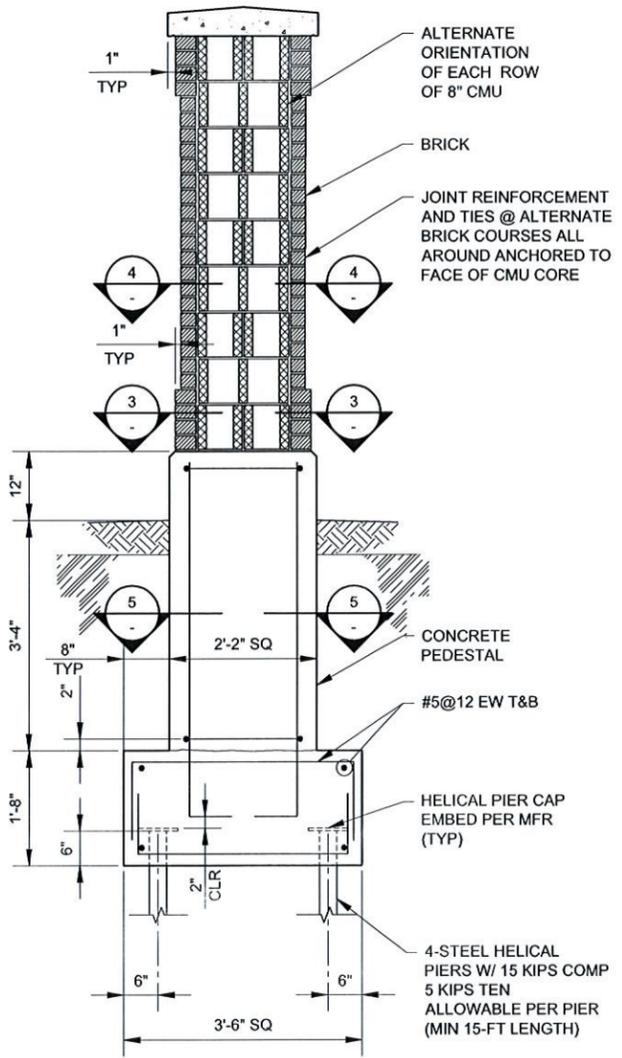
PROJECT 804134	STRUCTURAL GENERAL NOTES, ABBREVIATIONS AND LEGEND
CONTRACT 14P072	
FILE NAME 4134S0001	
MINNEAPOLIS	MINNESOTA

PLOTTED: 5/9/2014 2:33:04 PM
 MODIFIED: 5/12/2014 8:24:46 AM
 C:\CDM\MIN

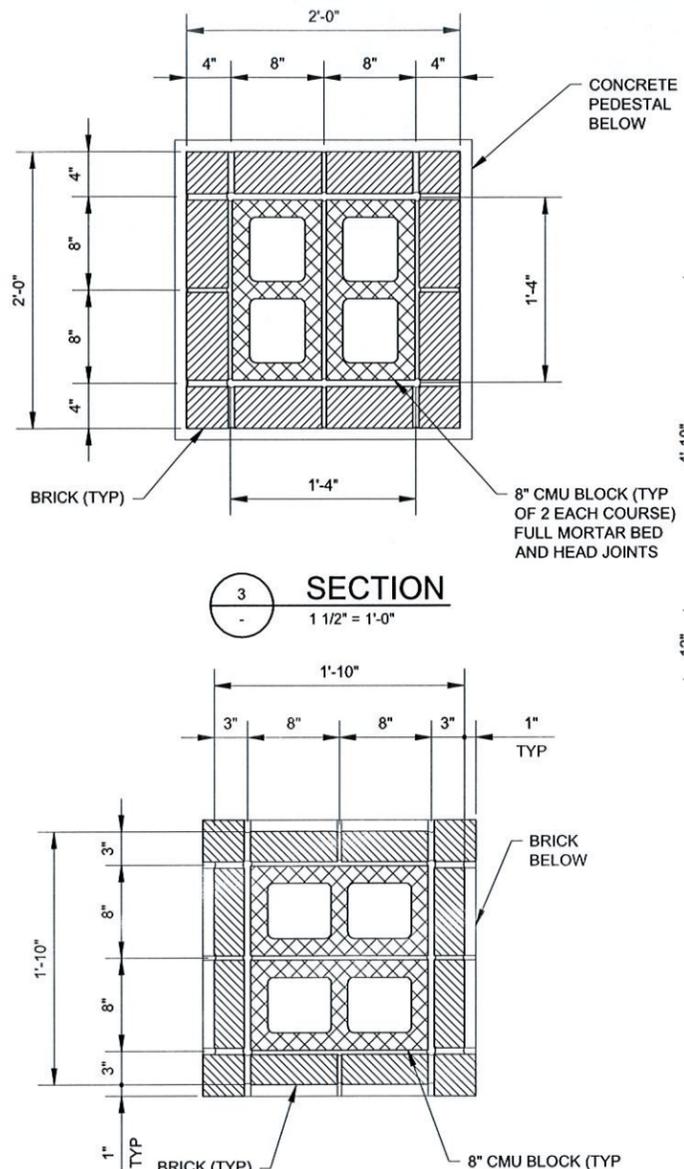
PLOTTED: 5/12/14 9:43:30 AM
 MODIFIED: 5/12/14 9:27:44 AM



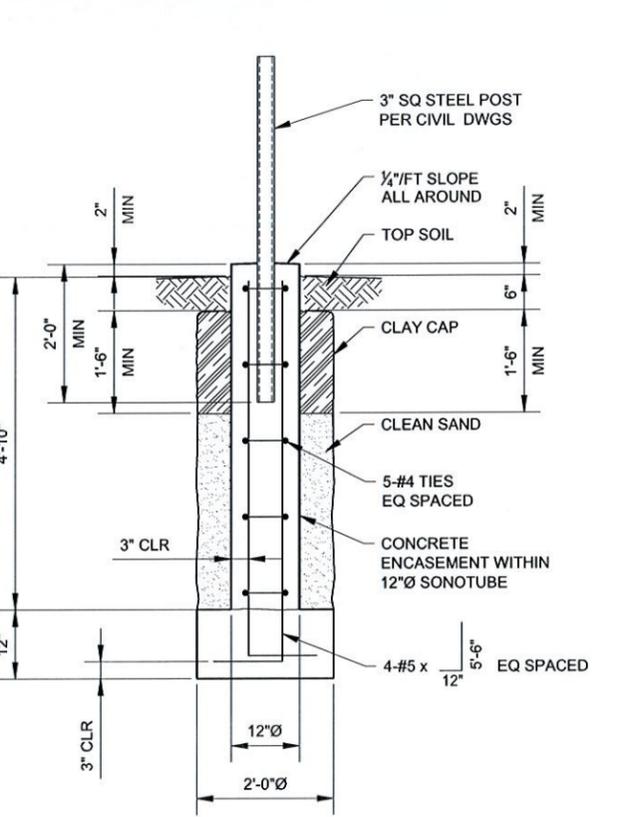
1 BRICK FENCE COLUMN ELEVATION
 3/4" = 1'-0"



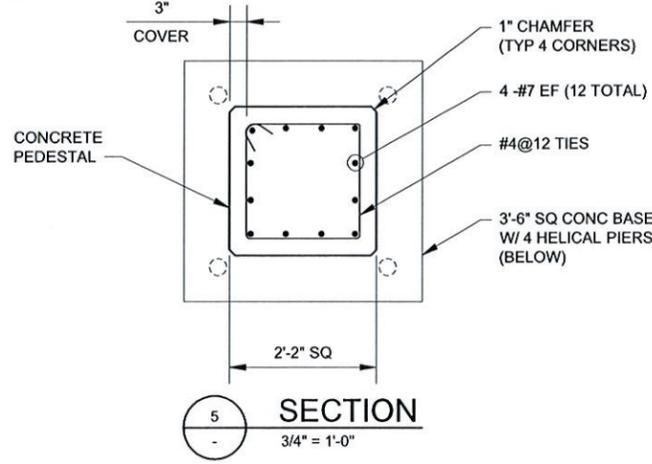
2 SECTION
 3/4" = 1'-0"



3 SECTION
 1 1/2" = 1'-0"



INTERMEDIATE FENCE POST FOUNDATION DETAIL
 3/4" = 1'-0"



5 SECTION
 3/4" = 1'-0"

- NOTES:**
1. AUGER 5'-0"Ø x 5'-6" DEEP EXCAVATION AT EACH COLUMN LOCATION. CONTRACTOR MAY NEED TEMPORARY CASING OF 5'-0"Ø EXCAVATION DURING CONSTRUCTION FOR ACCESS AND SAFETY. REMOVE CASING DURING FINAL BACKFILLING.
 2. PROVIDE A 6" SAND WORKING LAYER IN BOTTOM.
 3. BACK FILL WITH CLEAN SAND TO A MINIMUM DEPTH OF 24" BELOW GRADE.
 4. MIN TOP 24" OF BACK FILL SHALL BE 18" OF CLAY CAP WITH 6" OF TOP SOIL AND POSITIVE DRAINAGE AWAY FROM THE COLUMN BASE.
 5. SUBMIT STEEL HELICAL PIER DESIGN BY LICENSED PE IN MINNESOTA FOR MANUFACTURER & DESIGN LOADS LISTED IN SECTION 2/- FOR REVIEW PRIOR TO CONSTRUCTION.

- GENERAL FENCE NOTES:**
1. BRICKS, FINISH, LAYOUT, JOINT TOOLING, ETC SHALL MATCH EXISTING BRICK WORK ON EXISTING FENCE COLUMNS. CONTRACTOR TO CONFIRM DIMENSIONS AND NUMBER OF COURSES OF BRICK ON EXISTING COLUMNS PRIOR TO SUBMITTAL OF SHOP DRAWINGS.

NO	DATE	BY	REVISIONS	NO	DATE	BY	REVISIONS
	05/12/14	WFL	ISSUED FOR BIDDING				

DESIGNED	AV	CHECKED	BRM
DRAWN	MG	APPROVED	WFL
DATE	05/12/14	CONSULTANT NO	

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

CDM Smith
 7650 Cornell Blvd, Suite 300
 Woodbury, MN 55125
 Tel: (651) 252-3800

SIGNATURE: *Brian R. McKee*
 TYPED OR PRINTED NAME: BRIAN R. MCKEE
 DATE: 05/12/14 REG NO: 44163

APPROVED RECORD DOCUMENT	
CONSULTING ENGR REP	DATE
MCES CONSTRUCTION DEPT REP	DATE
MCES ENGR DEPT REP	DATE

PROJECT	804134
CONTRACT	14PO72
FILE NAME	4134S0002
MINNEAPOLIS	



Proposed Fence Location



Proposed Fence Location

