#2015-63 Crystal Lake South High School
Project Review for Planning and Zoning Commission

Meeting Date: January 20, 2016

Requests:

1. Special Use Permit (Section 2-400) for a high school for existing South High School.
2. Special Use Permit (Section 4-600D) for accessory structures over 900 square feet.
3. Variations for:
   a) Section 3-200 A/B from the maximum height requirement of 15 feet for an accessory structure to permit 21' 9" for the proposed west bleachers and 42' 3" for the proposed east bleachers.
   b) Section 4-200D4 from the required parking standard of 1,087 parking spaces to allow 1,046 available parking spaces via on-site and off-site parking arrangements.

Location: 1200 S. McHenry Avenue

Acreage: 59 acres

Existing Zoning: R-2 Single Family

Surrounding Properties:

North:	R-2, R-3B, B-2: single and multi-family residential, inline retail center
South:	R-2, R-3B: single and multi-family residential
East:	RE: treatment plant
West:	R-2: single family residential

Staff Contact: Michelle Rentzsch (815.356.3605)

Background:

- Previous Approvals: The South High School property was annexed in 1977 without the granting of a special use permit, as none was required at that time. As such, the property has been considered legal non-conforming.
- Existing Use: The site is utilized for South High School, the ancillary athletic fields, and associated parking areas.
- Request: A Special Use Permit to bring the zoning up-to-date with the current UDO to grant approval for the overall South High School campus. A Special Use Permit for the proposed accessory structures over 900 square feet and variations for accessory structure height and required number of parking spaces.

Development Analysis:

- General: The football field that is located along the western property line of the South High School property included bleacher structures on the east and west side of the field. The proposal is to upgrade the bleachers on both sides of the field and to construct a press box on the eastern side of the field.
- Land Use: The Comprehensive Land Use map identifies the area as Public – Semi Public based upon the public high school land use.
- Zoning: The site is zoned R-2 Single Family which permits new secondary schools (high schools) via a special use permit review. A request for a Special Use Permit for the South High School campus is part of this request.

Bleachers

- The plans propose that the press box be incorporated into the home bleachers, located on the east side of the field.
- The height of the proposed east side bleachers, after the addition of the press box, would be 42 feet 3 inches.
- The height of the visitors (west side) bleachers is proposed to be at 21 feet 9 inches.
- Previously there were approximately 2,000 bleacher seats with the old bleachers. The proposed bleachers will increase the capacity to ~3,261 bleacher seats (958 seats on west side and 2,303 seats on east side).
- The old bleachers on the west side were 56 feet wide with 14 rows. The proposed bleachers are 192 feet wide with 9 rows (more than three times in width and reduced in height).
- The old bleachers on the east side were 126 feet wide with 20 rows. The proposed bleachers will be 192 feet wide with 22 rows (slightly wider and taller).

Landscape Buffer

- The submitted landscape plan shows proposed landscaping to provide a 25-foot buffer area between the west side bleachers and the single family residential. The plan details a mix of deciduous trees to provide screening at greater heights and a solid evergreen screen of 8-foot tall spruces to provide year-round cover.

Parking

- Based upon the plat of survey submitted by the petitioner, there are currently 703 standard, 16 handicapped, and 14 temporary parking spaces noted on the site. In addition, 102 bus stalls are listed are identified by the petitioner.
- Based on the UDO parking requirements for high schools and the total number of bleachers seats of 3,261, a total of 1,087 parking spaces are required for the proposed project. 719 full-time parking spaces currently exist on-site.
- The High School is formalizing a license agreement with St. Elizabeth Ann Seton for use of their parking spaces, which offer 269 parking spaces during low-demand times for the church. Staff and the City's legal counsel will review the license agreement to ensure that the spaces will at all times remain available as a condition of the special use permits and parking variation.

- The School District has provided a Parking Overflow plan that shows aisle and aisle-end spaces that could be utilized when parking is in greater demand. This Overflow plan would offer an additional 58 parking spaces.
- For particularly large events, the busses can be relocated to another property and the 102 bus stalls utilized for attendee parking.
- The total available 1,046 spaces for events (703 standard, 16 handicapped, 58 overflow spaces and 269 spaces at St. Elizabeth Ann Seton), brings total existing or available parking spaces close to the UDO requirement of 1,087 spaces.

Stormwater

- The engineering submittals relating to the proposed project have been revised to obtain compliance with the City's stormwater requirements.

Findings of fact:

SPECIAL USE PERMIT

Special Uses require a separate review because of their potential to impact surrounding properties and the orderly development of the City. A special use permit is requested for a secondary schools (high schools) to accommodate the existing South High School campus and bring the zoning approval in compliance with the current UDO requirements. Also, any accessory structures greater than 900 square feet in area are required to obtain a special use permit; therefore, a special use permit is requested for the proposed bleachers. Section 2-400 of the Unified Development Ordinance establishes standard for all Special Uses in Crystal Lake. The criteria are as follows:

1. That the proposed use is necessary or desirable, at the location involved, to provide a service or facility which will further the public convenience and contribute to the general welfare of the neighborhood or community.

   ☐ *Meets* ☐ *Does not meet*

2. That the proposed use will not be detrimental to the value of other properties or improvements in the vicinity.

   ☐ *Meets* ☐ *Does not meet*

3. That the proposed use will comply with the regulations of the zoning district in which it is located and this Ordinance generally, including, but not limited to, all applicable yard and bulk regulations, parking and loading regulations, sign control regulations, watershed, wetlands, and flood plain regulations, ~~Building and Fire Codes~~ and all other applicable City Ordinances. [NOTE: South High School is not subject to City building and fire codes.]

   ☐ *Meets* ☐ *Does not meet*

4. That the proposed use will not negatively impact the existing off-site traffic circulation; will adequately address on-site traffic circulation; will provide adequate on-site parking facilities; and, if required, will contribute financially, in proportion to its impact, to upgrading roadway and parking systems.

☐ *Meets* ☐ *Does not meet*

5. That the proposed use will not negatively impact existing public utilities and municipal service delivery systems and, if required, will contribute financially, in proportion to its impact, to the upgrading of public utility systems and municipal service delivery systems.

   ☐ *Meets* ☐ *Does not meet*

6. That the proposed use will not impact negatively on the environment by creating air, noise, or water pollution; ground contamination; or unsightly views.

   ☐ *Meets* ☐ *Does not meet*

7. That the proposed use will maintain, where possible, existing mature vegetation; provide adequate screening to residential properties; provide landscaping in forms of ground covers, trees and shrubs; and provide architecture, which is aesthetically appealing, compatible or complementary to surrounding properties and acceptable by community standards, as further detailed in Article 4, Development and Design Standards.

   ☐ *Meets* ☐ *Does not meet*

8. That the proposed use will meet standards and requirements established by jurisdictions other than the City such as Federal, State or County statutes requiring licensing procedures or health/safety inspections, and submit written evidence thereof.

   ☐ *Meets* ☐ *Does not meet*

9. That the proposed use shall conform to any stipulations or conditions approved as part of a Special Use Permit issued for such use.

   ☐ *Meets* ☐ *Does not meet*

10. That the proposed use shall conform to the standards established for specific special uses as provided in this section.

    ☐ *Meets* ☐ *Does not meet*

ZONING VARIATIONS

The petitioner is requesting two variations from accessory structure height and parking standards. Section 3-200 A/B from the maximum height requirement of 15 feet for an accessory structure to permit 21’ 9” for the proposed west bleachers and 42’ 3” for the proposed east bleachers and Section 4-200D4 from the required parking standard of 1,087 parking spaces to allow a total number of 1,046 available parking spaces via on-site and off-site parking arrangements.

The Unified Development Ordinance lists specific standards for the review and approval of a variation. The granting of a variation rests upon the applicant proving practical difficulty or hardship caused by the Ordinance requirements as they relate to the property. To be considered a zoning hardship, the specific zoning requirements; setbacks, lot width and lot area must create

a unique situation on this property. It is the responsibility of the petitioner to prove hardship at the Planning and Zoning Commission public hearing.

Standards
When evidence in a specific case shows conclusively that literal enforcement of any provision of this Ordinance would result in a practical difficulty or particular hardship because:

a. The plight of the property owner is due to unique circumstances, such as, unusual surroundings or conditions of the property involved, or by reason of exceptional narrowness, shallowness or shape of a zoning lot, or because of unique topography, or underground conditions.

☐ *Meets* ☐ *Does not meet*

b. Also, that the variation, if granted, will not alter the essential character of the locality.

☐ *Meets* ☐ *Does not meet*

For the purposes of supplementing the above standards, the Commission may take into consideration the extent to which the following facts favorable to the application have been established by the evidence presented at the public hearing:

a. That the conditions upon which the application for variation is based would not be applicable generally to other property within the same zoning classification;

☐ *Meets* ☐ *Does not meet*

b. That the alleged difficulty or hardship has not been created by any person presently having interest in the property;

☐ *Meets* ☐ *Does not meet*

c. That the granting of the variation will not be detrimental to the public welfare or injurious to other property or improvements in the neighborhood in which the property is located; or

☐ *Meets* ☐ *Does not meet*

d. That the proposed variation will not impair an adequate supply of light or air to adjacent property, will not unreasonably diminish or impair the property values of adjacent property, will not unreasonably increase congestion in the public streets, substantially increase the danger of fire or otherwise endanger public safety.

☐ *Meets* ☐ *Does not meet*

Where the evidence is not found to justify such conditions, that fact shall be reported to the City Council with a recommendation that the variations be denied.

2030 Comprehensive Land Use Plan Review:

The Comprehensive Plan designates the subject property as Public and Semi Public. Public and Semi-Public uses are located throughout the city and are meant to serve the community in numerous ways. Public facilities are described as schools, libraries, park district facilities, as well as municipal services, such as fire rescue, police and administration. These uses are managed by separate public entities, each of which is funded separately through tax dollars and other revenues.

Goal: Provide area for high quality public and semi-public facilities, such as schools, libraries, municipal facilities and private service providers, throughout the city to support the diverse and evolving needs of people in the city.

Supporting Action: The City shall support the school districts, library, park district, neighboring municipalities, private service providers and other public and semi-public agencies.

Success Indicators:
- The biennial evaluation of impact fees for schools, parks, libraries and municipal services, to ensure that fees keep pace with relative costs.
- The number of zoning approvals for public/semi public projects.

Recommended Conditions:
If a motion to recommend approval of the petitioner's request is made, the following conditions are recommended:

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Community High School District 155, date signed 12/1/15)
   B. Plat of Survey (Marchese and Sons, dated 11/7/2014)
   C. Architectural Site Plan (FGM Architects, dated 11/30/15)
   D. Bleacher Elevations (FGM Architects, dated 11/30/15)
   E. Landscape Plan (FGM Architects, dated 11/30/15)
   F. Site Improvement Plans (Spaceco, dated 12/19/14, revised 11/23/15)

2. Site Plan
   A) The plat of survey at the northwest corner of the site indicates Concord Drive traverses the School District's property. This right-of-way was dedicated with Four Colonies Unit 11 and should be corrected on the survey.

3. Sounds Standards
   A) The speaker system for the football field must be maintained in a position so that the speakers are mounted in an easterly direction.

4. Bleachers
   A) The plans do not provide specific details on the screening fence on the west-side bleachers. The west-side bleachers screening fence may be chain-link with neutral colored privacy slat inserts. The final details of all proposed fencing must be submitted for review and approval by staff.

5. Parking Plan
   A) For large-scale events where more attendees are expected than can be accommodated with the provided parking, bus relocation must be provided to allow for additional on-site parking for event attendees.
   B) Crossing attendees must be provided to aid pedestrians crossing from St. Elizabeth Ann Seton to the High School property. The petitioner enter into and keep in force a license agreement with St. Elizabeth Ann Seton to ensure that not less than 269 parking during low demand times for the church. The license agreement shall be subject to the review and approval of the City Attorney.

6. Landscape Plan
   A) Indicate the location of the existing chain link fence west of the football field and its relation to the proposed landscape screen. It may be beneficial to keep the existing fence in place and located the proposed landscaping as close to the fence as practical on the east side, allowing for more room for stormwater conveyance to the west.
   B) Extend a landscape screening material for the single family homes to the north and south to completely screen the west-side bleachers.
   C) The landscape screening material must be planted as soon as practical to establish the plants early and maintained as long as the bleachers are present. Provide a maintenance plan for the landscape screen to the City.
   D) Substitute the proposed grasses shown in the area along the rear yards of the single family homes for a more maintainable vegetated cover.

7. Future Accessory Structures
   A) No additional accessory structures shall be constructed or installed without the petitioner having first applied for and obtained approval of an amendment to the special use permit.

8. The petitioner shall address all of the review comments and requirements of the Fire Rescue, Police, Public Works and Community Development Departments and the City's stormwater consultant, CBBL.

CITY OF CRYSTAL LAKE
DEVELOPMENT APPLICATION

RECEIVED
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BY:

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Office Use Only
File # _____

Project Title: **Community High School District 155 Special Use Permit for Overall School Campus and Improvements at Football Stadium**

Action Requested:

	Annexation		Preliminary PUD
	Comprehensive Plan Amendment		Preliminary Plat of Subdivision
	Conceptual PUD Review		Rezoning
	Final PUD	X	Special Use Permits
	Final PUD Amendment	X	Variation
	Final Plat of Subdivision		Other:

Petitioner Information

Name: Community HS District 155 and the Board of Ed of Comm HS Dist 155

Address: One South Virginia Road
Crystal Lake, IL 60014

Phone: 815-455-8500

Fax: 815-459-5022

E-mail: jthomas@d155.org

Owner Information (if different)

Name:

Address:

Phone:

Fax:

E-mail:

Property Information:

Project Description: See Exhibit A attached.

Project Address/Location: 59.051 acres having a common address of 1200 South McHenry Avenue, Crystal Lake, Illinois and known as the Crystal Lake South High School campus.

PIN Number(s): 19-18-200-005 and 19-18-200-008

Development Team

Please include address, phone, fax, and e-mail

Developer:

Architect: FGM Architects, 1211 West 22nd Street, Suite 705, Oak Brook, Illinois 60523-2019; phone: 630-574-8300; fax: 630-574-9292; joshc@fgmarchitects.com

Attorney: Lisa M. Waggoner, 4 N. Walkup Ave., Crystal Lake, Illinois 60014; phone: 815-477-0830; fax: 815-477-0834; lwaggoner@waggonerlawfirm.com

Engineer:

Landscape Architect: FGM Architects, 1211 West 22nd Street, Suite 705, Oak Brook, Illinois 60523-2019; phone: 630-574-8300; fax: 630-574-9292; joshc@fgmarchitects.com

Planner:

Surveyor: Marchese and Sons, Inc., 10 Monaco Drive, Roselle, Illinois 60172; phone 630-894-5680; fax 630-894-8869

Other:

Signatures:

The undersigned, on behalf of Community High School District 155 and the Board of Education of Community High School District 155, herewith submits this application,

By:

Johnnie Thomas

PETITIONER: Dr. Johnnie Thomas, Superintendent

December 1, 2015
Date

As owner of the property in question, I hereby authorize the seeking of the above requested action.

OWNER:

Date

NOTE: If the subject property is held in trust, the trust officer must sign this petition as owner. In addition, the trust officer must provide a letter which names all beneficiaries of the trust.

Exhibit A

The Petitioner herewith submits its Application for a Special Use Permit for the existing improvements at the overall Crystal Lake South High School Campus, so that the campus will be accepted as being in compliance with the provision of the Crystal Lake Unified Development Ordinance (" UDO") or the improvements accepted in their current condition and locations. Also Petitioner is requesting the issuance of a Special Use Permit and Variations for proposed structures to allow the placement and approval of bleacher structures located at the football/athletic field at 1200 S. McHenry Avenue, Crystal Lake, Illinois

Specifically, regarding the proposed structures, the Petitioner requests a new Special Use Permit be issued, as required under Section 4-600 D. of the Crystal Lake Unified Development Ordinance, to approve and allow the placement of the west side bleachers already existing at the property, as depicted on the FGM Architectural Site Plan and Elevations Plan, both dated November 30, 2015, which Plans more specifically sets forth the location of said bleachers, their lineal dimensions and vertical dimensions. Additionally, the Petitioner requests the Special Use Permit to be issued to approve installation of new east side bleachers, as proposed in the FGM Architectural Site Plan and Elevations Plan, both dated November 30, 2015, which plans specifically sets forth the location of said bleachers, their lineal dimensions and vertical dimensions, including the installation of the existing press box being stored at the property. The Petitioner proposes to install a landscape buffer, as depicted in the FGM Landscape Plan dated November 30, 2015, which has been designed to exceed the requirements of the UDO for buffering from residential properties.

The Petitioner also requests a height variation from the maximum 15 feet for an accessory structure to allow a maximum total height of 21 feet, 9 inches for the west side bleachers, inclusive of a six (6) foot privacy screen. The Petitioner also requests a height variation from the maximum 15 feet for an accessory structure to allow a maximum height of 42 feet, 3 inches for the east side bleachers, including the relocated press box. Finally, a variation is being sought from the required parking standard of 1,087 parking spaces, to accept and allow the existing 733 parking spaces, pursuant to Sections 3-200 A/B, and 4-200 D4, respectively, of the Crystal Lake Unified Development Ordinance.

Petitioner herewith respectfully requests the approval of its Application for Special Use Permits and Variations for the improvements at 1200 S. McHenry Avenue as depicted on the Plans included with this Application. In addition, Petitioner requests the waiver of the application fee in the amount of $3,355.00, in light of its status as a governmental entity.

PUBLIC NOTICE

BEFORE THE PLANNING AND ZONING COMMISSION OF THE CITY OF CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

IN THE MATTER OF THE APPLICATION OF McHenry County Board of School Trustees, as Owner, and Community High School District 155 and the Board of Education of Community High School District 155, as Petitioner

LEGAL NOTICE

Notice is hereby given in compliance with the Unified Development Ordinance (UDO) of the City of Crystal Lake, Illinois, that a public hearing will be held before the Planning and Zoning Commission upon the application of McHenry County Board of School Trustees, as Owner, and Community High School District 155 and the Board of Education of Community High School District 155, as Petitioner, relating to the property containing South High School and its accessory uses/structures having permanent index numbers 19-18-200-005 and 19-18-200-008 and commonly known as South High School, 1200 McHenry Avenue, Crystal Lake, Illinois 60014.

This application is filed for the purpose of requesting Special Use Permits for a High School to accommodate the existing High School building and related accessory buildings/structures and for non-residential accessory structures over 900 square feet, a height variation from the 15-foot height limitation for an accessory structure to allow 21' 9" for the visitors (west side) bleachers and 42' 3" for the home (east side) bleachers, a variation from the required parking standard of 1,087 parking spaces to allow the existing 733 parking spaces pursuant to Sections 2-400, 4-600D, 3-200A/B, and 4-200D4, respectively, of the Crystal Lake Unified Development Ordinance and any other variations or zoning relief that may be required or desirable for the project as indicated on the submitted application and plans.

A public hearing before the Planning and Zoning Commission on the request will be held at 7:30 p.m. on Wednesday, January 20, 2016, at the Crystal Lake City Hall, 100 West Woodstock Street, at which time and place any person determining to be heard may be present.

Tom Hayden, Chair
Planning and Zoning Commission
City of Crystal Lake

(Published in the Northwest Herald January 5, 2016) 1146814


WINDSOR DRIVE
SUTHERLAND
SILVER ASPEN CIRCLE
COVENTRY LANE
DARTMOOR DRIVE
CONCORD DRIVE
WINDSLOW CIRCLE
AMBERWOOD DRIVE
JAMES RIVER ROAD
WESTPORT RIDGE
FERNLEAF DRIVE
MONARCH DRIVE
CRIMSON DR
REGENT DRIVE
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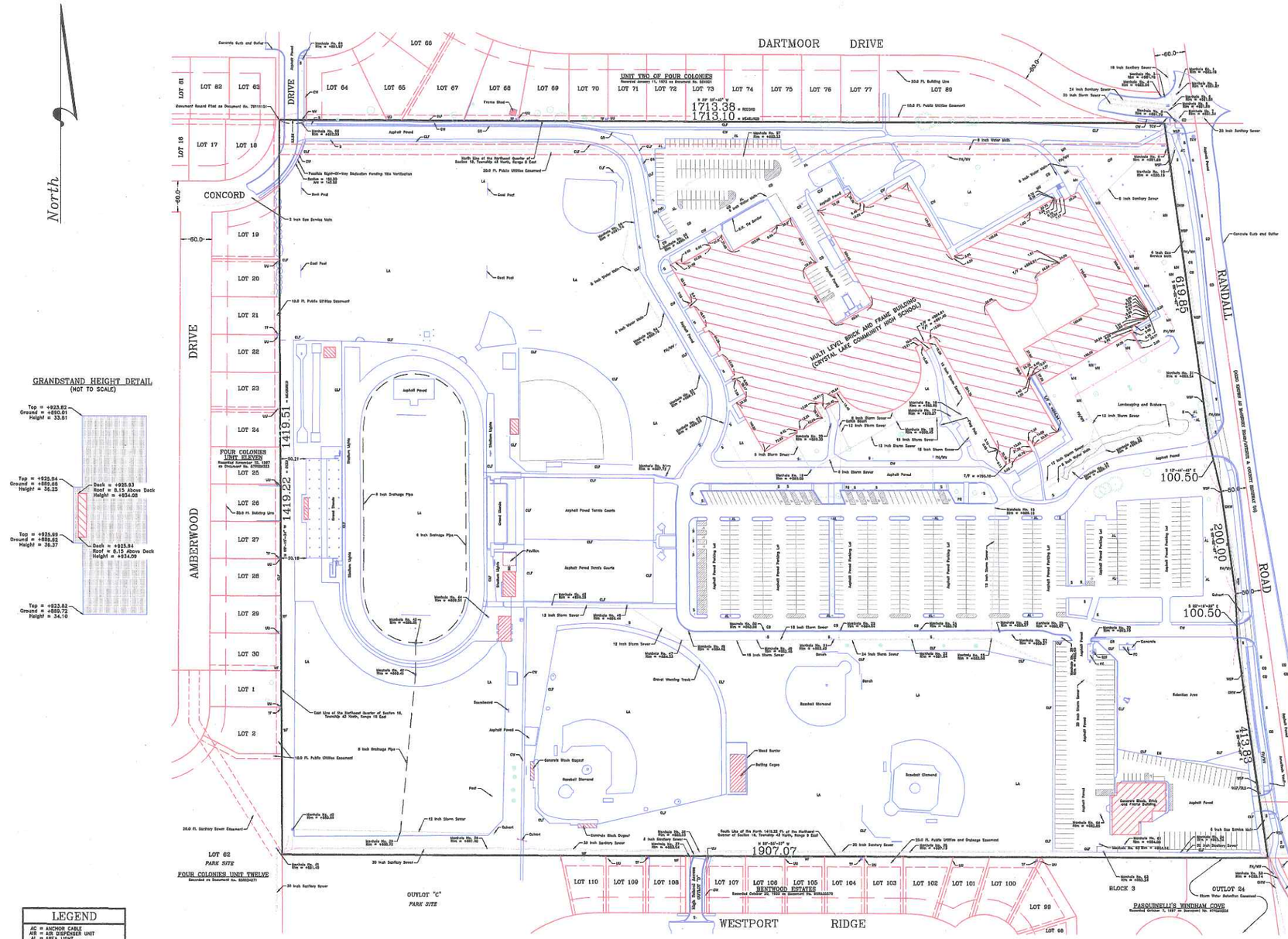
464.87
163.31



PLAT OF SURVEY

Prepared By

MARCHESE AND SONS, Inc.

Design Firm No. 184-002762

land – marine – construction surveys

10 Monaco Drive
Roselle, Illinois 60172

Phone : (630) 894-5680
FAX : (630) 894-8869

PROPERTY DESCRIPTION

THE NORTH 1419.22 FEET OF THE NORTHEAST QUARTER OF SECTION EIGHTEEN, TOWNSHIP FORTY-THREE NORTH, RANGE EIGHT, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING WEST OF THE WESTERLY RIGHT-OF-WAY OF RANDALL ROAD (ALSO KNOWN AS McHENRY AVENUE), IN McHENRY COUNTY, ILLINOIS.

CONTAINING 2572272 SQUARE FEET OR 59.051 ACRES, MORE OR LESS

2015 63
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DEC 03 2015
BY:

GRANDSTAND HEIGHT DETAIL

(NOT TO SCALE)

LEGEND

☼ = AREA LIGHT (AL)
● = CATCH BASIN (CB)
— = CONCRETE PARKING BUMPER
▬ = CURB DRAIN (CD)
• = FIRE HYDRANT (FH)
= GAS METER (GM)
= HANDICAPPED PARKING SPACE
○ = MANHOLE COVER (MH)
○ = MONITOR WELL (MW)
— = OVERHEAD WIRES (OHW)
• = PIPE BOLLARD (PB)
| = SIGN (S)
= STREET LIGHT STANDARD (SLS)
= TRAFFIC CONTROL LIGHT (TCL)
• = WOOD SERVICE POLE (WSP)
○ = TREE
= EVERGREEN TREE
— = PROPERTY BOUNDARY
— = PARCEL LINES
— = EASEMENTS

PARKING STALL SUMMARY

STANDARD STALLS	703
HANDICAPPED STALLS	16
TEMPORARY STALLS	14
BUS STALLS	102
TOTAL	835

SITE LOCATION MAP

(NOT TO SCALE)

SHEET: 1 OF 2

PIN NO.: 19 - 18 - 200 - 008

ADDRESS: 1200 S. McHENRY AVENUE
CRYSTAL LAKE, IL
CRYSTAL LAKE SOUTH HIGH SCHOOL

SCALE: ONE INCH = EIGHTY FEET

ORDER NO.: 01-14235

ORDERED BY: MR. JEFF DAURER
FOR SCHOOL DISTRICT NO. 155

COMPARE ALL POINT BEFORE BUILDING BY SAME AND AT ONCE REPORT ANY DIFFERENCE. FOR BUILDING LINE AND OTHER RESTRICTIONS NOT SHOWN HEREON REFER TO YOUR CONTRACT, DEED, TITLE INSURANCE POLICY AND ZONING ORDINANCE. BASIS OF BEARINGS SHOWN HEREON HAVE BEEN ASSUMED. MONUMENTS OR WITNESS POINTS WERE NOT SET AT THE CLIENT'S REQUEST.

"THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY."

STATE OF ILLINOIS
S.S.
COUNTY OF DuPAGE

I, PAUL N. MARCHESE, HEREBY CERTIFY THAT I HAVE SURVEYED THE ABOVE DESCRIBED PROPERTY AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID SURVEY.

DATED AT ROSELLE, NOVEMBER 7, 2014

PAUL N. MARCHESE 2461

Paul N Marchese

ILLINOIS LICENSED PROFESSIONAL LAND SURVEYOR NO. 2461
MY CURRENT LICENSE EXPIRES ON NOVEMBER 30, 2016
FIELD WORK COMPLETED ON NOVEMBER 7, 2014

LEGEND

AC = ANCHOR CABLE
AIR = AIR DISPENSER UNIT
AL = AREA LIGHT
AS = ADVERTISEMENT SIGN
CB = CATCH BASIN
CD = CURB DRAIN
CLF = CHAIN LINK FENCE
CW = CONCRETE WALK
EM = ELECTRIC METER
FC = FILLER COVER
FH = FIRE HYDRANT
GM = GAS METER
GR = METAL GUARD RAIL
GV = GAS VALVE
LA = LAWN AREA
TU = TELEPHONE UTILITY UNIT
M = MONITOR WELL COVER
MC = MANHOLE COVER
OHW = OVERHEAD WIRES
PB = PIPE BALLARD
PT = PUBLIC TELEPHONE
S = SIGN
SC = SUPPORT COLUMN
SLS = STREET LIGHT STANDARD
TCB = TRAFFIC CONTROL BOX
TCL = TRAFFIC CONTROL SIGNAL LIGHT
TCV = TRAFFIC CONTROL VAULT
TF = TRANSFORMERS
UND = UNDERGROUND WIRES
UU = UTILITY UNIT
VP = VENTILATION PIPES
WSP = WOOD SERVICE POLE
WV = WATER VALVE

ONE INCH = EIGHTY FEET

SCALE METRIC SYSTEM BAR

NOTE : UNDERGROUND UTILITIES SHOWN HEREON, HAVE BEEN PLOTTED WITH THE AID OF AVAILABLE RECORDS. FOR LOCATIONS OF UNDERGROUND UTILITY MAINS, PLEASE CONTACT J.U.L.I.E. BY CALLING 811 OR 1-800-892-0123.

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Prepared By

MARCHESE AND SONS, Inc.

Design Firm No. 184-002762

land – marine – construction surveys

10 Monaco Drive
Roselle, Illinois 60172

Phone : (630) 894-5680
FAX : (630) 894-8869

SHEET: 2 OF 2

PIN NO.: 19 - 18 - 200 - 006

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CRYSTAL LAKE, IL
CRYSTAL LAKE SOUTH HIGH SCHOOL

SCALE: ONE INCH = EIGHTY FEET

ORDER NO.: 01–14235

ORDERED BY: MR. JEFF DAURER
SCHOOL DISTRICT NO. 155

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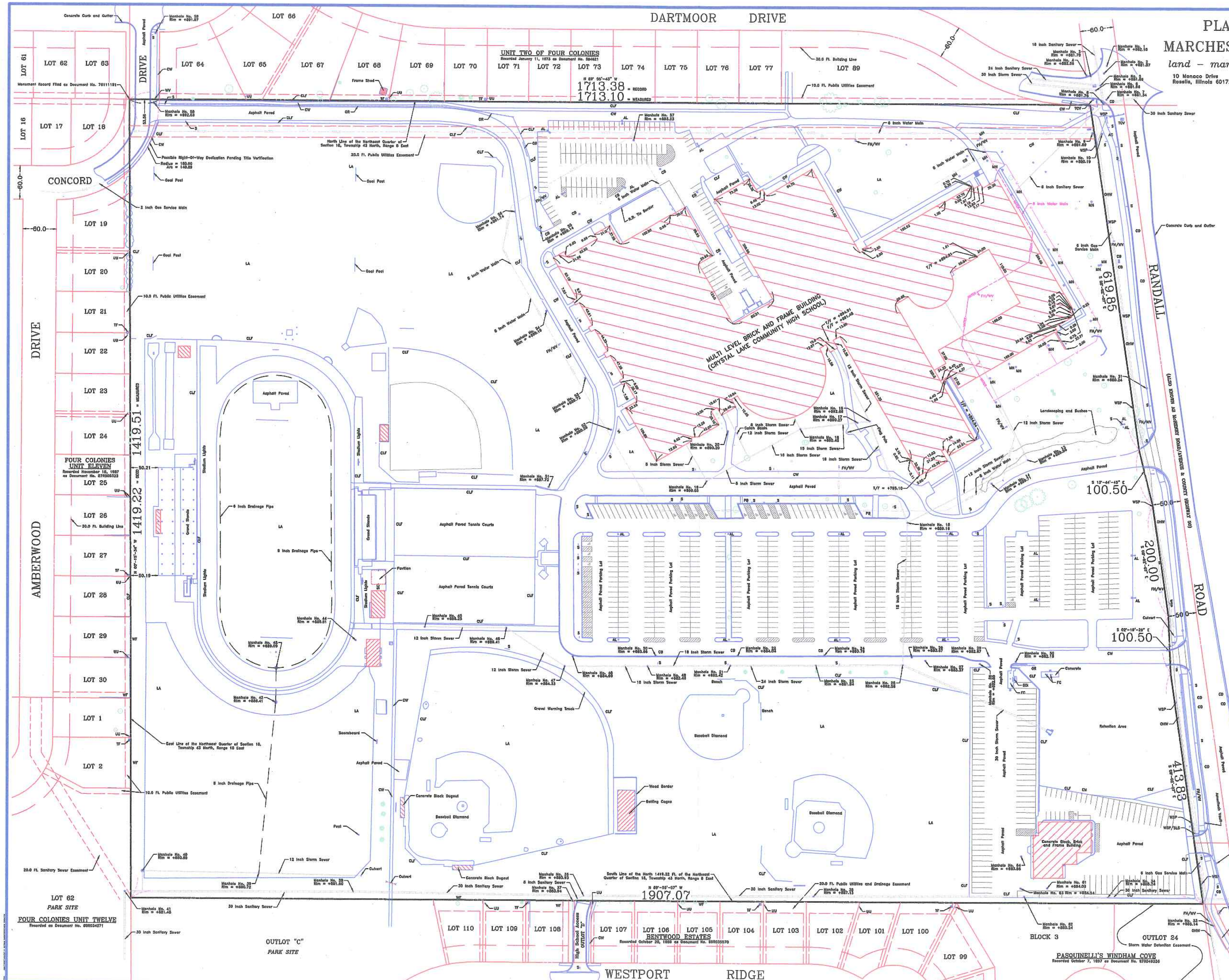
"THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY."



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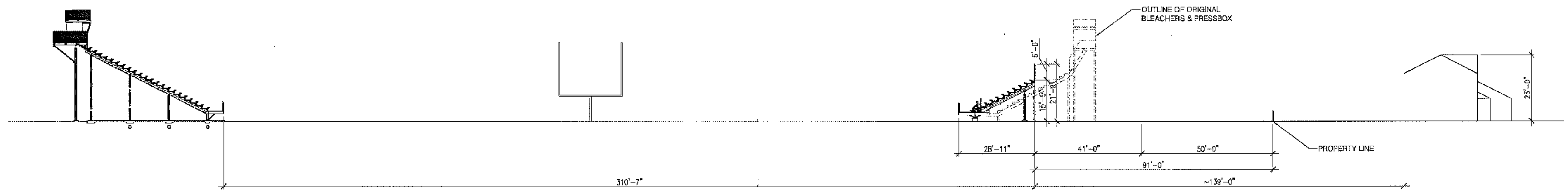

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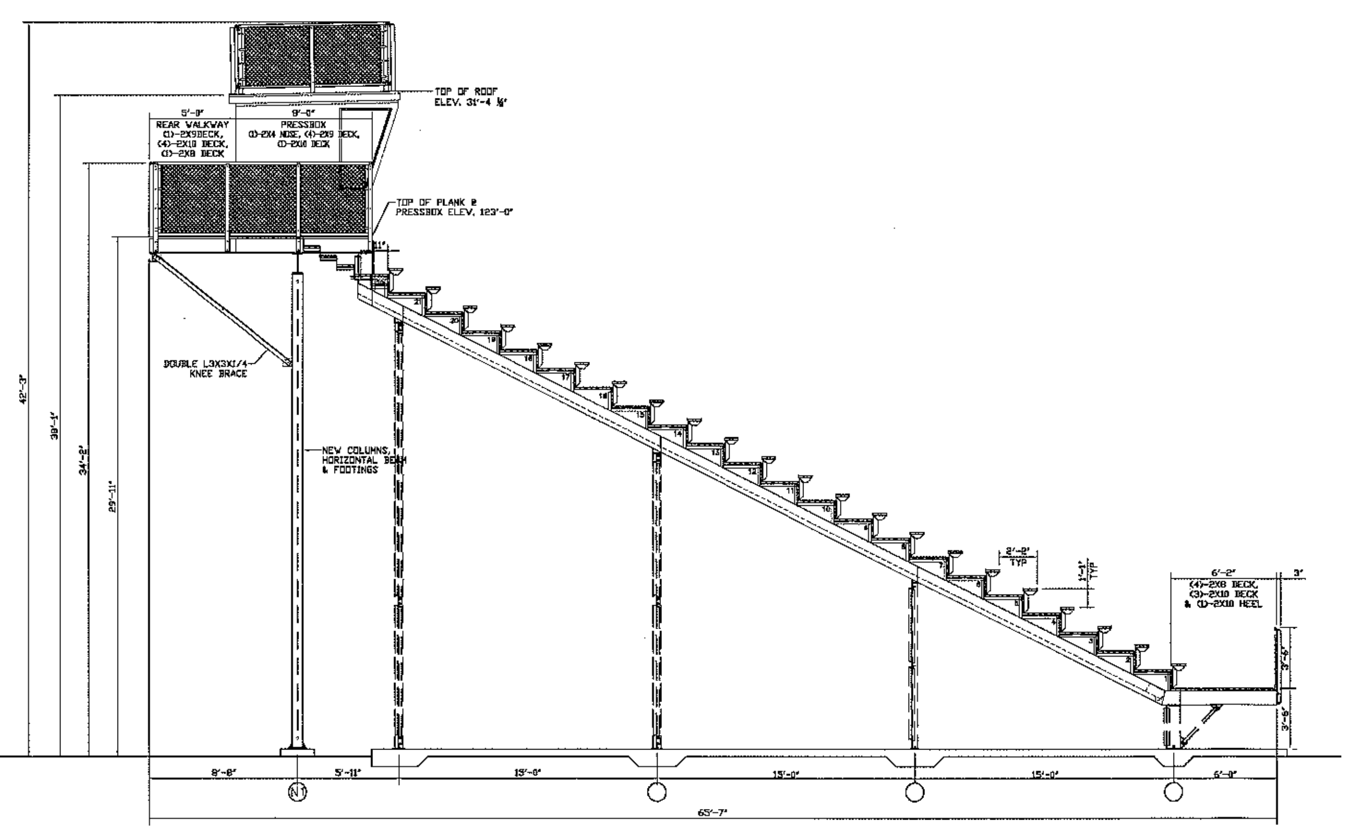
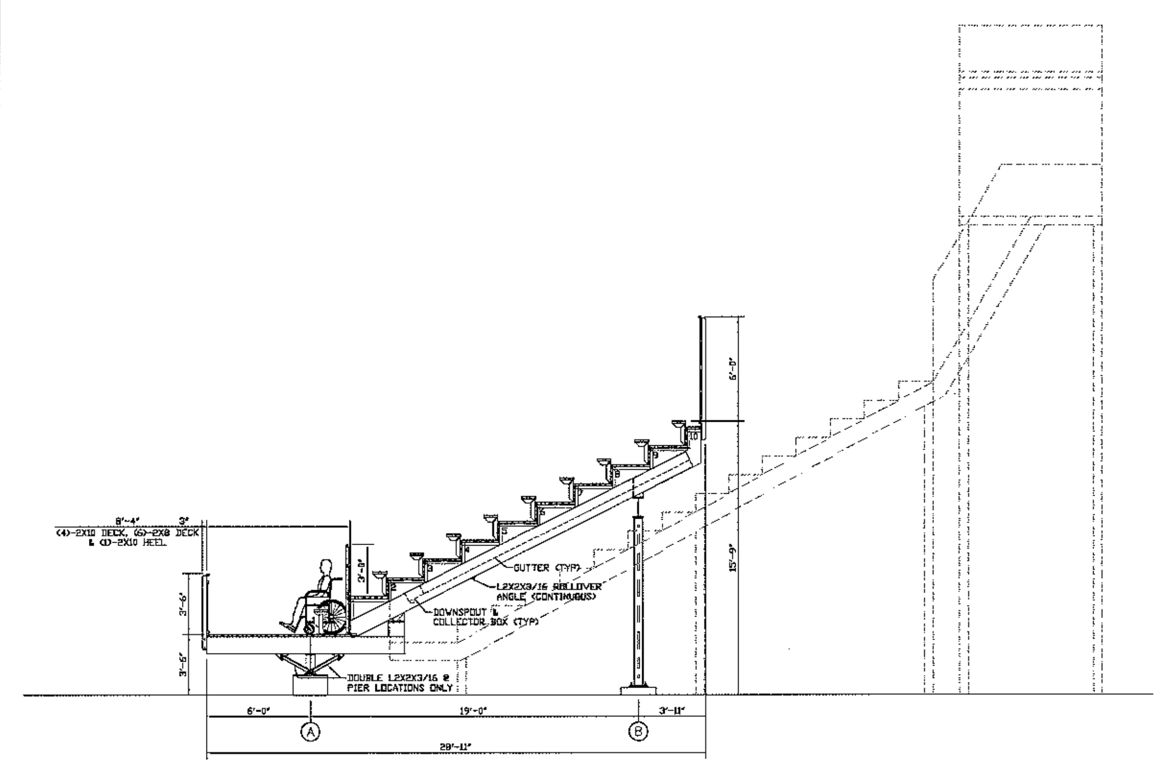
RECEIVED
DEC 03 2015
BY:

J14 ELEVATION/SECTION - PROPOSED EAST BLEACHERS W/ RELOCATED PRESSBOX & WEST BLEACHERS
SCALE: 1/16" = 1'-0"



A1 TYPICAL ELEVATION/SECTION - PROPOSED EAST BLEACHERS
SCALE: 1/4" = 1'-0"



A14 TYPICAL ELEVATION/SECTION - WEST BLEACHERS
SCALE: 1/4" = 1'-0"

ISSUANCE			
NO	DATE	DESCRIPTION	APPROVED
	11/30/15	ISSUED FOR ZONING	

FGM ARCHITECTS
OAK BROOK O'FALLON CHICAGO
1211 West 22nd Street, Suite 705
Oak Brook, IL 60523-2019
Phone: 630.574.8300
Fax: 630.574.9292
www.fgmarchitects.com

DRAWN JC
CHECKED JC
APPROVED JC
Professional Design Firm # 184-000350

COMMUNITY HIGH SCHOOL DISTRICT 155
SOUTH HIGH SCHOOL - OUTDOOR BLEACHERS / PRESSBOX
1200 SOUTH MCHENRY AVENUE
CRYSTAL LAKE, ILLINOIS 60014

ELEVATIONS/SECTIONS EAST + WEST BLEACHERS

JOB NO 12-1558.03

SHEET NO
A1.01
OF

LEGEND

PROPOSED DECIDUOUS OVERSTORY TREE

PROPOSED COLUMNAR TREE

PROPOSED EVERGREEN TREE

TOTAL PROPOSED PLANT MATERIALS:
- 3 OVERSTORY DECIDUOUS TREES
- 9 COLUMNAR TREES
- 21 EVERGREEN TREES

N1 LEGEND
NOT TO SCALE

REPRESENTATIVE PLANT LIST

KEY	QUANTITY	BOTANIC NAME	COMMON NAME	SIZE	REMARKS
DECIDUOUS OVERSTORY TREES					
AJR		ACER F. 'JEFFERS RED'	AUTUMN BLAZE FREEMAN MAPLE	3"	BB
			16' HIGH X 8' WIDE @ INSTALLATION; 50' HIGH X 40' WIDE @ MATURITY		
PMC		PLATANUS X. ACERIFOLIA 'MORTON CIRCLE'	EXCLAMATION LONDON PLANETREE	3"	BB
			16' HIGH X 8 WIDE @ INSTALLATION; 60' HIGH X 45' WIDE @ MATURITY		
DECIDUOUS COLUMNAR TREES					
ARA		ACER R. 'ARMSTRONG'	ARMSTRONG RED MAPLE	3"	BB
			15' HIGH X 4' WIDE @ INSTALLATION; 50' HIGH X 15' WIDE @ MATURITY		
GPS		GINKGO B. 'PRINCETON SENTRY'	PRINCETON SENTRY MAIDENHAIR TREE	3"	BB (2)
			15' HIGH X 5' WIDE @ INSTALLATION; 55' HIGH X 20' WIDE @ MATURITY		
EVERGREEN TREES					
PP		PICEA PUNGENS	COLORADO SPRUCE	8'	BB (1)
			8' HIGH X 7' WIDE @ INSTALLATION; 45' HIGH X 18' WIDE @ MATURITY		
PGD		PICEA GLAUCA DENSATA	BLACK HILLS SPRUCE	8'	BB (1)
			8' HIGH X 7' WIDE @ INSTALLATION; 35' HIGH X 15' WIDE @ MATURITY		

REMARKS
1. FULL SPECIMENS, BRANCHED TO THE GROUND
2. MALE ONLY

N8 REPRESENTATIVE PLANT LIST
NOT TO SCALE

MATERIAL SCHEDULE

KEY	QUANTITY	MATERIAL	REMARKS
-	- C.Y.	MULCH	SHREDDED HARDWOOD
-	AS REQ.	SEED – KENTUCKY BLUEGRASS, PERENNIAL RYEGRASS, FESCUE BLEND	FOR SITE RESTORATION WORK
-	1,092 S.Y.	SIDE-SLOPE NATIVE SEED MIX	SEE GENERAL NOTE BELOW
-	1,765 S.Y.	SWALE BOTTOM SEED MIX	SEE GENERAL NOTE BELOW

SIDE-SLOPE NATIVE SEED MIX (4 SPECIES) INSTALL AT 16/LBS. PER ACRE

COMMON NAME	SCIENTIFIC NAME	AMOUNT
LITTLE BLUESTEM	ANDROPOGON SCOPARIUS	4 LBS.
SWITCHGRASS	PANICUM VIRGATUM	2 LBS.
SIDE-OATS GRAMA	BOUTELOUA CURTIPENDULA	8 LBS.
VIRGINIA WILD RYE	ELYMUS VIRGINICUS	4 LBS.

SWALE BOTTOM NATIVE SEED MIX (9 SPECIES) INSTALL AT 11/LBS. PER ACRE

COMMON NAME	SCIENTIFIC NAME	AMOUNT
BROWN FOX SEDGE	CAREX VULPINOIDEA	1 LB.
RED-ROOTED SPIKE RUSH	ELEOCHARIS ERYTHRYODA	0.25 LBS.
BARNYARD GRASS	ECHINOCHLOA CRUSGALLI	5 LBS.
BENT GRASS	AGROSTIS ALBA PALUSTIRS	3 LBS.
TICK SEED SPECIES	BIDENS SP.	0.5 LBS.
SWAMP MILKWEED	ASCLEPIA INCARNATA	0.125 LBS.
RIVER BULRUSH	SCIRPUS FLUVIATILIS	0.5 LBS.
SOFT STEM BULRUSH	SCIRPUS VALIDUS	0.5 LBS.
PANICLED ASTER	ASTER SIMPLEX	0.125 LBS.

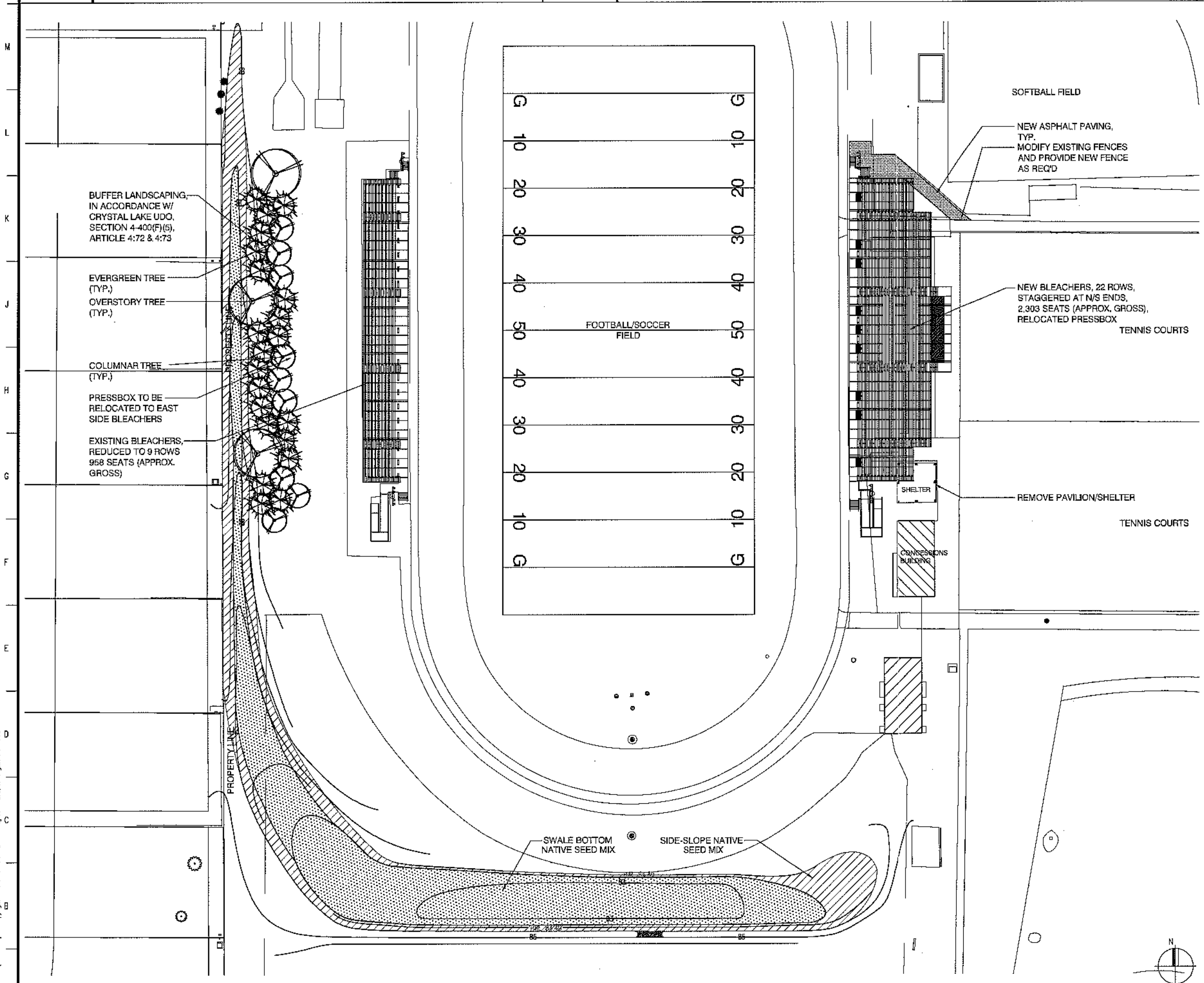
COVER CROP INSTALL AT 50/LBS. PER ACRE

COMMON NAME	SCIENTIFIC NAME
SEED OATS	AVENA SATIVA

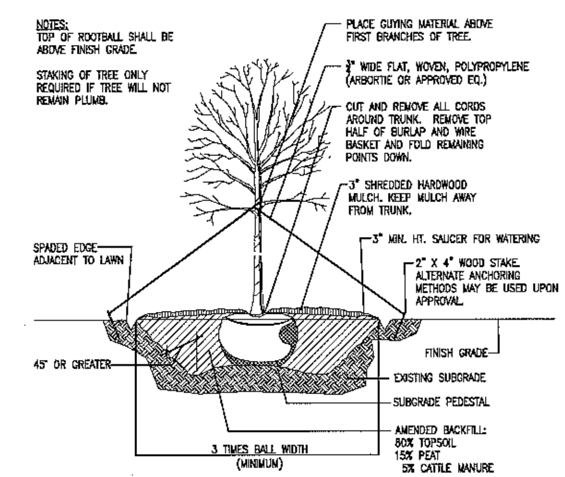
2015 53

N17 SCHEDULE AND NOTES

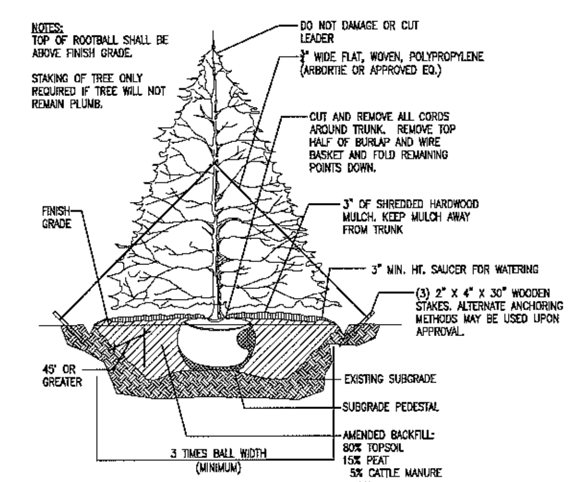
RECEIVED
DEC 03 2015



A1 LANDSCAPE PLAN
SCALE: 1" = 30'-0"



DECIDUOUS TREE INSTALLATION DETAIL



EVERGREEN TREE INSTALLATION DETAIL

A17 INSTALLATION DETAILS
NOT TO SCALE

ISSUANCE			
NO	DATE	DESCRIPTION	APPROVED
	11/30/15	ISSUED FOR ZONING	

FGM ARCHITECTS
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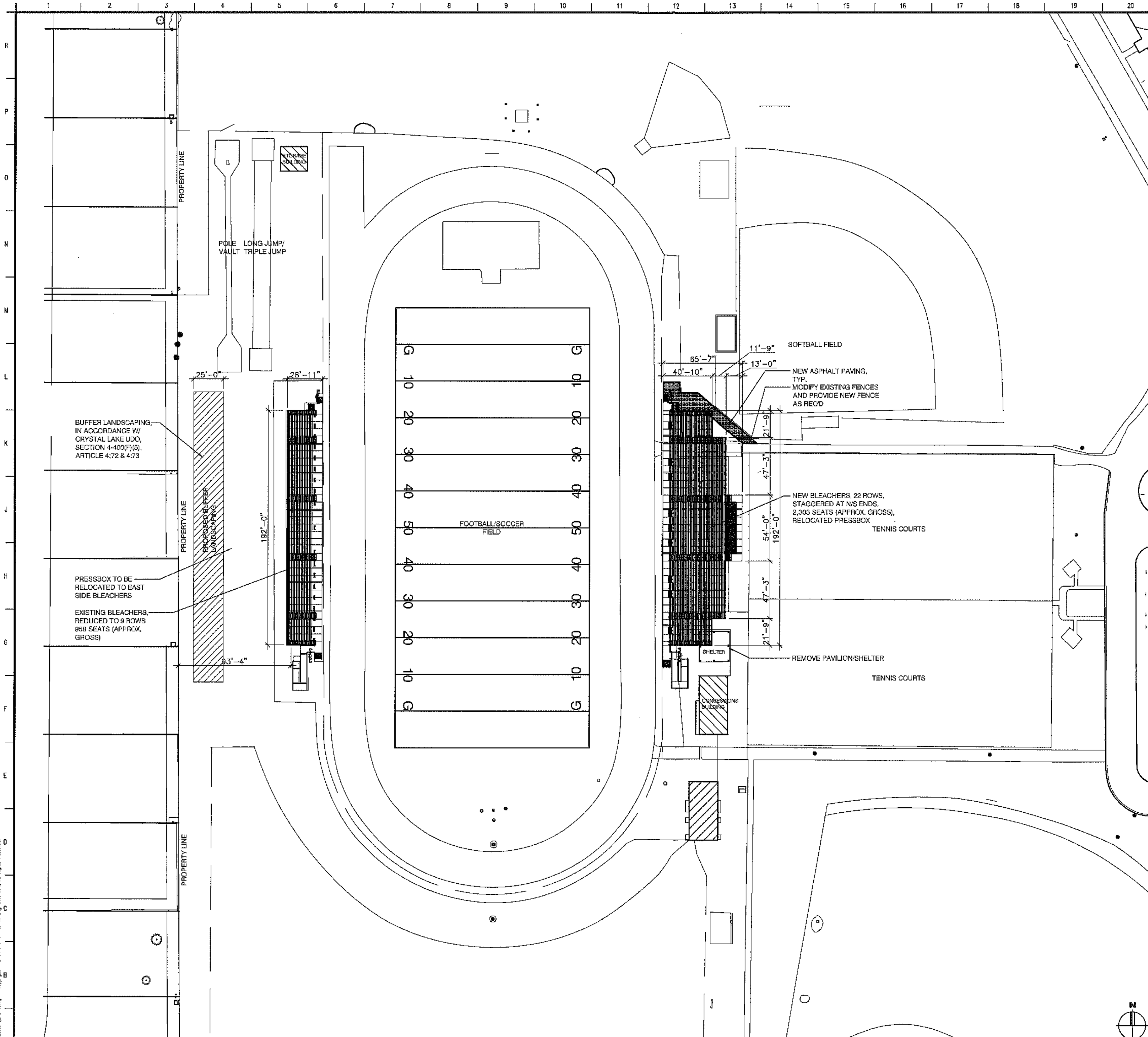
SOUTH HIGH SCHOOL - OUTDOOR BLEACHERS / PRESSBOX
1200 SOUTH MCHENRY AVENUE
CRYSTAL LAKE, ILLINOIS 60014

LANDSCAPE PLAN

JOB NO 12-1558.03

SHEET NO **L1.01**



A1 **ARCHITECTURAL SITE PLAN - PROPOSED BLEACHERS/PRESSBOX**

SCALE: 1" = 30'-0"

GENERAL NOTES:

REFER TO PLAT OF SURVEY FOR THE FOLLOWING INFORMATION:

- LAND AREA
- PARKING

BLEACHER DATA:

- WEST SIDE:
  958 APPROX. GROSS SEATING CAPACITY
- EAST SIDE:
  2,303 APPROX. GROSS SEATING CAPACITY
- TOTAL APPROX. GROSS SEATING CAPACITY:
  3,261

- WEST SIDE BLEACHER HEIGHT - PROPOSED (PRESSBOX REMOVED & REDUCED TO 9 ROWS):
  TOP OF LAST ROW = +15'-9"
  TOP OF 6 FT. SCREEN @ LAST ROW = +21'-9"

- EAST SIDE BLEACHER HEIGHT - EXISTING CONDITIONS:
  TOP OF GUARDRAIL @ LAST ROW = +25'-8"
- EAST SIDE BLEACHER HEIGHTS - PROPOSED (PRESSBOX ADDED):
  TOP OF LAST ROW (16 ROW AREAS) = +21'-3"
  TOP OF GUARDRAIL @ LAST ROW (16 ROW AREAS) = +25-8"
  TOP OF LAST ROW (22 ROW AREA) = +27'-9"
  TOP OF GUARDRAIL @ LAST ROW (22 ROW AREA) = +32'-2"
  TOP OF GUARDRAIL @ PRESSBOX PLATFORM = +34'-2"
  TOP OF PRESSBOX ROOF = +38'-1"

2015 63

RECEIVED

DEC 0 3 2015

BY:

A21 **NOTES**

SCALE: NTS

ISSUANCE			
NO	DATE	DESCRIPTION	APPROVED
1	11/30/15	ISSUED FOR ZONING	

FGM ARCHITECTS

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COMMUNITY HIGH SCHOOL DISTRICT 155
SOUTH HIGH SCHOOL - OUTDOOR BLEACHERS / PRESSBOX
1200 SOUTH MCHENRY AVENUE
CRYSTAL LAKE, ILLINOIS 60014

ARCHITECTURAL SITE PLAN

JOB NO 12-1558.03

SHEET NO **A0.01**

OF

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

2015 63

Final Stormwater Management Report

Crystal Lake South High School
Outdoor Bleachers
1200 S. McHenry Avenue

City of Crystal Lake
McHenry County, Illinois

Project No. 6934.10
December 19, 2014
Revised January 22, 2015
Revised November 23, 2015

CONTENTS

Tab Description

1 Narrative

Narrative

This report summarizes the Stormwater Management requirements and design for the outdoor bleacher improvements completed at the Crystal Lake South High School located at 1200 S. McHenry Avenue in Crystal Lake.

Per the City of Crystal Lake Stormwater Management Ordinance, detention is required for any improvements since 2005 with a total new impervious area greater than 20,000 SF. While the current improvements proposed with the outdoor bleachers do not exceed the 20,000 SF threshold, a parking lot area of approximately 28,000 sf was completed on site after 2005. Detention was provided for the new parking lot at the time it was constructed; however, any new impervious area on site now requires additional detention to be provided. As indicated in the tables below and in the "Site Improvement Plans for the Crystal Lake South High School Outdoor Bleachers", several existing impervious areas have been removed and are proposed to be replaced as part of the bleacher improvements.

EXISTING IMPERVIOUS AREA REMOVED - 2014	
PAVING TO WEST SIDE BLEACHERS	1,420 SF
PAVING TO EAST SIDE BLEACHERS	1,998 SF
PAVING FOR POLE VAULT	1,175 SF
PAVING FOR LONG JUMP/TRIPLE JUMP	2,553 SF
EAST SIDE PAVILION AND GRAND STANDS	5,824 SF
TOTAL	12,970 SF

NEW IMPERVIOUS AREA - 2015	
PATH AROUND SOUTH END OF TRACK	2,859 SF
PAVING AROUND WEST SIDE BLEACHERS	1,135 SF
PAVEMENT UNDER/ADJACENT TO EAST SIDE BLEACHERS	12,627 SF
PAVING FOR POLE VAULT	1,840 SF
PAVING FOR LONG JUMP/TRIPLE JUMP	2,805 SF
PAVING UNDER WEST SIDE BLEACHERS	5,079 SF
TOTAL IMPERVIOUS AREA	26,345 SF
EXISTING IMPERVIOUS AREA REMOVED IN DEMOLITION	12,970 SF
NET NEW IMPERVIOUS AREA REQUIRING DETENTION	13,375 SF

The following calculations for required detention are for the 13,375 SF of net new impervious area proposed with these improvements and for the hydrologically disturbed area of approximately 51,477 SF included in the swale and detention basin grading, resulting in a total area of disturbance of 64,852 SF. The overflow weir calculation is based on the overall tributary area to the detention basin. These areas are shown in the exhibit entitled "Stormwater Management Areas" included at the end of this report.

Water Quality treatment measures include a drainage swale to convey the stormwater to the detention basin. The swale and detention basin will be planted with wetland type plantings as specified in the landscaping plans. This measure promotes stormwater quality through filtration and maximizing possible infiltration into the ground.

2 Stormwater Management Permit Application

CITY OF CRYSTAL LAKE

Crystal Lake Municipal Complex
100 W. Woodstock Street
Crystal Lake, IL 60014

Phone (815) 459-2020
Fax (815) 479-1647
www.crystallake.org

STORMWATER MANAGEMENT PERMIT APPLICATION

The City of Crystal Lake is a Certified Community
Authorized by the McHenry County Stormwater Committee

Application Date: November 23, 2015 Delivery Method: ☒ Drop-Off ☐ Mail ☐ Fax ☐ Email

Property Owner	
Name:	
Company:	Crystal Lake HS Dist. 155
Address:	1 S. Virginia Road Crystal Lake, IL
Phone #:	847-455-8500
Email Address:	
Fax #:	

Owner's Agent*	
Name:	Thomas McCabe, P.E.
Company:	SPACECO, Inc.
Address:	9575 W. Higgins Road, Ste. 700, Rosemont, IL, 60018
Phone #:	847-696-4060
Email Address:	tmccabe@spacecoinc.com
PE License #*:	062-044159

**For Intermediate, Major, & SFHA Developments, the Owner's Agent must be an Illinois Licensed Professional Engineer*

Property Information			
Project Name	Crystal Lake South HS - Outdoor Bleachers		
Property Address	1200 S. McHenry Ave., Crystal Lake, IL	Total Ownership Area, sq-ft	2,611,422 sf
		New Impervious Area, sq-ft	13,375 sf
Parcel Number(s)	19-18-200-008 19-18-200-005	On-Site (Hydrologic) Disturbance Area, sq-ft**	64,852 sf
		Tributary Drainage Area, sq-ft**	500,504 sf
Description of Development	New outdoor bleachers and press box, relocate pole vault and long jump, grading and detention basin		

***Owner may leave this field blank if an engineering consultant has not been hired as the Owner's Agent to prepare the application.*

Signature – Property Owner or Owner's Agent Date

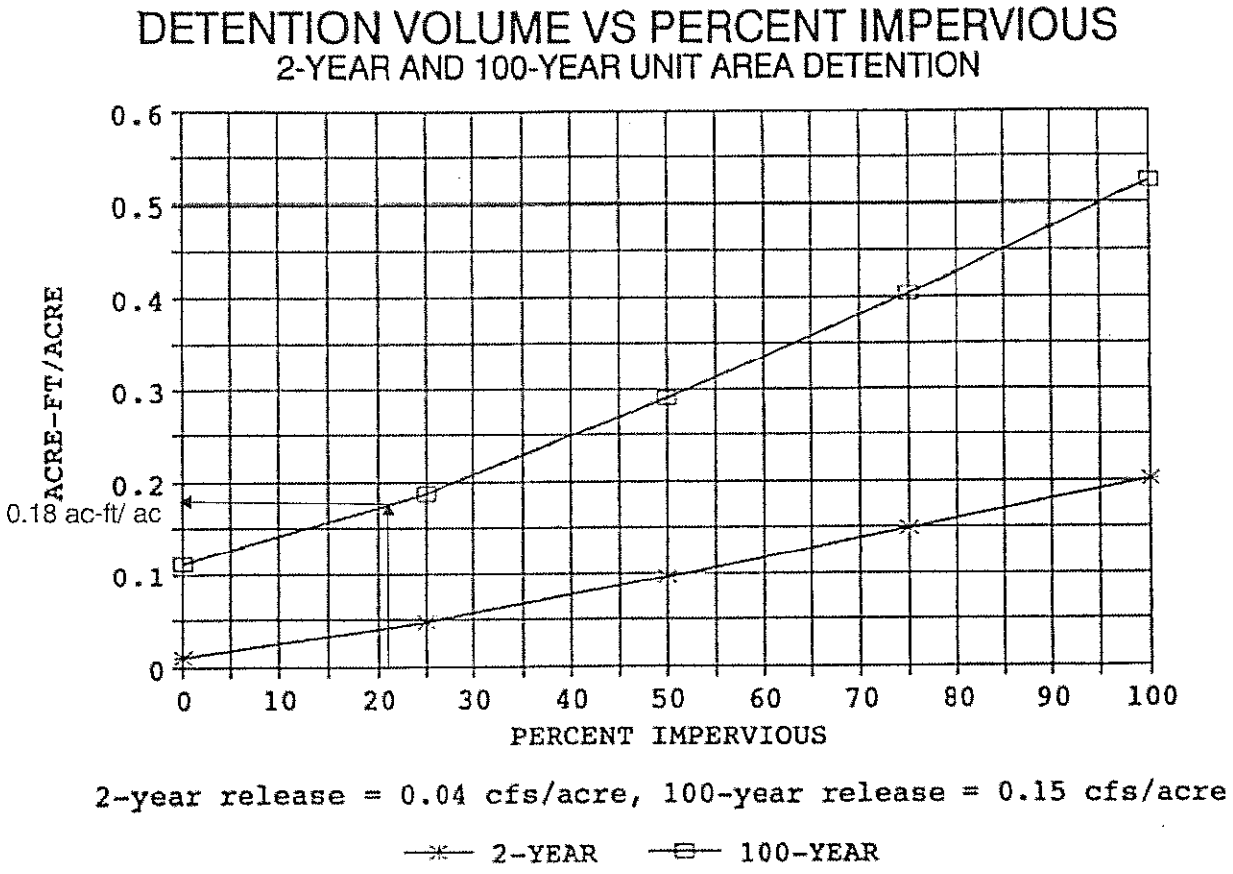
Under penalty of intentional misrepresentation and/or perjury, I declare that I have examined and/or made this application and it is true and correct to the best of my knowledge and belief. I agree to construct said improvement in compliance with all applicable provisions of the Crystal Lake Stormwater Ordinance. I realize that the information that I have affirmed hereon forms a basis for the issuance of the Stormwater Permit(s) herein applied for and approval of plans in connection therewith shall not be construed to permit any construction upon said premises or use thereof in violation of any provision or any applicable ordinance or to excuse the owner or his successors in title from complying therewith.

3 Final Stormwater Detention

Appendix 6

§15.60.200 Detention Volume vs. Percent Impervious Chart for McHenry County

Unit Area Detention Volume (NIPC, 1991)



% impervious = 13,375 sf/ 64,852 sf = 20.6%

hydrologically disturbed area = 64,852 sf

required detention = (0.18 ac-ft/ ac)(64,852 sf/ 43,560 sf/ac)

= = 0.268 ac-ft

SPACECO, INC.
9575 W. HIGGINS ROAD, SUITE 700
ROSEMONT, ILLINOIS 60018
TEL: (847) 696-4060 / FAX: (847) 696-4065

CRYSTAL LAKE SOUTH HIGH SCHOOL - OUTDOOR BLEACHERS
CRYSTAL LAKE, IL
PROJECT NO.: 6934.10
DATE: 12/19/2014
REVISED: 11/23/2015

RESTRICTOR CALCULATIONS FOR DETENTION BASIN

1. ALLOWABLE RELEASE (DRAINAGE AREA * ALLOWABLE RELEASE RATE)	=	0.254	CFS
2. H.W.L.	=	84.10	FEET
3. INVERT OF RESTRICTOR (N.W.L.)	=	81.90	FEET
4. TRY A NUMBER FOR DIAMETER OF THE RESTR.:		2.500	INCH
5. AREA OF RESTRICTOR:	A =	pi * r^2	
	A =	0.034	SQ-FEET
6. HEAD	H =	H.W.L. - INVERT OF RESTRICTOR (RESTRICTOR HORIZONTAL)	
	H =	2.200	FEET
7. COEFFICIENT OF DISCHARGE	C =	0.60	
8. DISCHARGE	Q =	C * A *SQRT(2*g*H) with g = 32.177	
	Q =	0.243	CFS O.K.

SPACECO, INC.
9575 West Higgins Road
Suite 700
Rosemont, IL 60018
Tel: (847) 696-4060
Fax: (847) 696-4065

Project: CRYSTAL LAKE HS - BLEACHERS
DISTRICT 155
Project Number: 6934.10
Date: 11/23/2015
Calculated by: SG
Checked by: --

STAGE STORAGE TABLE

Elevation	Depth (ft)	SA (sf)	SA (acre)	Inc. Volume (acre-ft)	Cumulative Volume (acre-ft)
82		0	0		0.000
	1.0			0.051	
83		4461	0.102410468		0.051
	1.0			0.198	
84.0		12793.0	0.293686869		0.249
	0.1			0.032	
84.1		15044.0	0.345362718		0.281

VOLUME PROVIDED: 0.281 AC-FT
VOLUME REQUIRED: 0.268 AC-FT

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT: CRYSTAL LAKE HIGH SCHOOL BLEACHERS
PROJECT #: 6934.10
DATE: 22-Jan-15 **REVISED:** 23-Nov-15

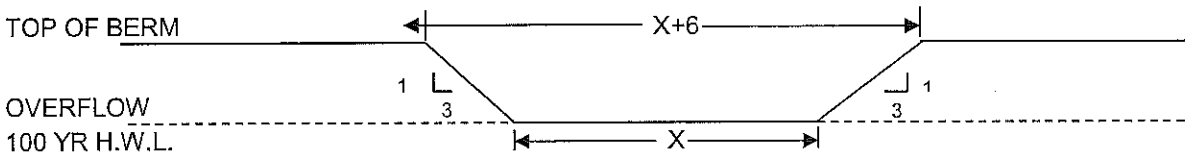
OVERFLOW WEIR DESIGN

- Size Q_{100} from site detention Area plus Q_{100} from Tributary Offsite Area

$Q_{100\ (DETENTION)}$ = 0.254 CFS

$Q_{100\ (TRIBUTARY\ AREA)}$ = (0.33)(9.88)(11.49acres)
= 37.46 cfs

Q_{100} INFLOW PEAK= 37.72 CFS



USE WEIR FORMULA

$Q = CAH^{1/2}$

UNKNOWNS		KNOWNS		
	A = (1/2) * [X+(X+6)] * H	H =	1.0	FT
	A = (X +3) * H	C =	2.6	
	A = 15.00 S.F.			

VARIABLES

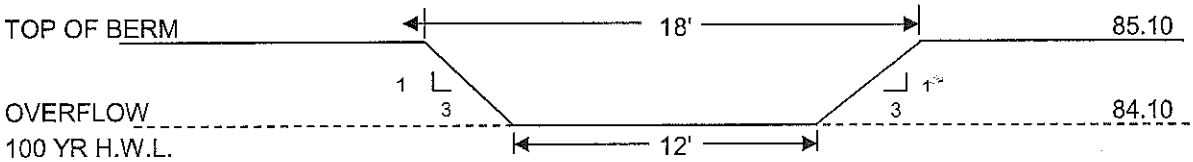
X = 12 FT

Q_{100YR} REQUIRED = 37.72 CFS

Q_{100} PROV. > Q_{100} REQ. TRUE

Q_{100YR} PROVIDED = 39.00 CFS

DESIGNED WEIR:



4 Stormwater Management Area Maintenance Plan

City of Crystal Lake
Stormwater Management System
Maintenance Plan and Agreement

This Agreement made as of this ____ day of _____, 2015, by and between the City of Crystal Lake, an Illinois municipal corporation, referred to herein as "CITY",

_____, referred herein as "CONTRACTOR" and Crystal Lake High School District 155, referred herein as "RESPONSIBLE PARTY", for the property described in **Exhibit A** attached hereto, which is located in the City of Crystal Lake, Illinois (said property hereinafter referred to as "PREMISES").

WHEREAS, the term "Stormwater Management System" (referred hereinafter as "SYSTEM" shall be defined as the following:

1. Structural components including but not limited to detention/retention basins, swales/channels, storm sewer piping, outlet/inlet structures, culverts, outflow pipes, restrictors, vegetation, basin retaining walls, trash racks, trench drains, drywells, water quality best management practices (BMP's), and
2. All associated appurtenances contributing to the function and maintenance of these components.

WHEREAS, the RESPONSIBLE PARTY is responsible for all components of the SYSTEM located in those areas on the RESPONSIBLE PARTY's PREMISES outside of dedicated street rights-of-way and described as the "Stormwater Management Easement" in the Plat of Easement (hereinafter referred to as the "EASEMENT DOCUMENT") and recorded with the Recorder's Office for the County of McHenry, State of Illinois as Document Number _____.

WHEREAS, both parties acknowledge that adequate drainage must be maintained to keep water away from the roadways adjacent to the SYSTEM.

NOW, THEREFORE, the CITY and RESPONSIBLE PARTY hereby agree to the following terms and conditions:

1. Supplemental Maintenance. The RESPONSIBLE PARTY is responsible for supplementing the maintenance, as required or as directed by the City Engineer, by repair or with replacement as the case may be, depending on the wear and tear of the provisions of the elements of the SYSTEM.

2. Sub-Surface Maintenance Considerations. The RESPONSIBLE PARTY will be responsible for cleaning and repairing the subsurface elements (culverts, outflow pipes, restrictors, etc.) and shall be especially guarded with these elements as they are not visually obvious as are the surface area elements. If the subsurface elements become clogged, water may flood pavement surfaces and may cause extensive erosion damage or water flow blockage; therefore, subsurface element cleaning shall be made a routine maintenance activity by the RESPONSIBLE PARTY, which shall be scheduled at least once a year and may need to be performed on an as-needed basis or as directed by the City Engineer. Experience will dictate the required cleaning frequencies for specific drainage items.

3. Record Keeping. The RESPONSIBLE PARTY shall maintain separate and distinct records, according to the requirements of the Crystal Lake Stormwater Ordinance, for all tasks performed and associated with the approved plans. The RESPONSIBLE PARTY shall record dates of maintenance visits and the specific work performed. Maintenance records shall be kept by the RESPONSIBLE PARTY and be available for the CITY's review upon request.

4. Dedicated Funding. The CONTRACTOR is responsible for the maintenance of the SYSTEM during construction and for two years following the completion and acceptance of the SYSTEM. The funding for this maintenance shall be the performance and maintenance surety (letter of credit or bond per the CITY's requirements). Once the CITY releases the maintenance surety, the RESPONSIBLE PARTY shall assume operation and maintenance of the SYSTEM. As part of their operating budget, money shall be set aside by the RESPONSIBLE PARTY for the continuing maintenance of the SYSTEM.

5. Maintenance Provisions. The RESPONSIBLE PARTY shall maintain the SYSTEM according to the provisions of the Crystal Lake Stormwater Ordinance including, but not limited to the following items:

    a. General. The RESPONSIBLE PARTY shall control litter and debris; properly dispose of sediment that has accumulated in the basins and structures as well as any wastes generated during maintenance operations; and repair riprap areas with the addition of new riprap, as necessary, of size and shape as originally specified on the approved plans.

b. Storage Facilities (Detention and Water Quality Treatment). The RESPONSIBLE PARTY shall periodically check the inlets and outlets of the basin(s) and clean as necessary to ensure that the flow structures are not blocked by debris; perform monthly inspections of the outlet control structure(s); immediately remove any debris near the orifice; check all ditches for debris that may block flow

c. Monthly Inspections. The RESPONSIBLE PARTY shall conduct monthly inspections during wet weather conditions from March to November of the following items:

   i. Shorelines. Inspect for erosion and riprap failures; undermining; and damage or deterioration – repair if necessary.

   ii. Vegetation. Inspect for the need for cutting (Non-native grasses shall be cut to no lower than 6" in height); need for planting, reseeding, or sodding (supplement alternative native vegetation is less than 50% of the area is not established and reseed with alternative grass species if original grass has not been successfully established); dead or damaged grassy areas (repair with sodding, seeding, or seeding + mulch); and invasive vegetation (remove where possible).

   iii. Principal and Emergency Outlets. Inspect for obstructions blocking outlet pipes, channels or spillways; condition of the outlet and inlet structures; condition of trash racks; any damage from debris, ice, or freezing; and outlet channel conditions downstream.

   iv. Access for Maintenance Equipment. Inspect to ensure that access to SYSTEM is clear of obstructions (woodpiles, sheds, vegetation, etc.). All applicable access/maintenance easements are shown on the EASEMENT DOCUMENT.

   v. Safety Features. Check condition and repair/clean, if needed, any access controls to hazardous areas; fences; loose or damaged posts; loose or broken wires; accumulated debris in fences; gates; and signs.

   vi. Volume. Inspect any detention/retention facilities of the SYSTEM to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the SYSTEM shall be allowed. Specific locations in the SYSTEM, designed to accumulate sediment, should be

dredged as necessary to prevent sediment from reaching the invert of any gravity outlet pipe.

vii. Storm Sewers and Collector Systems. Inspect to ensure that the storm sewers and collection structures of the SYSTEM are free draining in collection channels or catch basins; catch basins are clean with sediment removed from catch basins when more than 50% of the basin sump is filled; culverts are not obstructed by siltation deposits or debris and are cleaned as necessary; and that rim elevations are checked for change and that elevations are maintained per the approved plans (qualified person required to bring rims back to grade).

viii. Swales. Inspect dams in the swale and verify that the drainage ditches and side yard swales, if any, in the SYSTEM are maintaining originally constructed design slopes and cross-sectional areas per the approved plan. If no fill or sediment contributes to elevation changes in the swale, re-grading and re-shaping shall be performed. Licensed surveyors shall be required to layout and check grades. No landscaping (except as shown on the approved plan), earthen fill, or other obstructions shall be allowed in the swales that would impede design drainage flow patterns. If the bottom of the dry swales are not drawing down within 72-hours, the RESPONSIBLE PARTY SHALL rototill the bottom.

d. Maintenance, repairs, and replacements of all landscaped areas shall be furnished by the RESPONSIBLE PARTY and shall include without limitation the following:

i. Added planting, replanting, care and maintenance of trees, shrubs, flowers, grass, and all other landscaping.

ii. Maintenance, repair, and replacement of the Stormwater Management Areas and improvements.

6. City Responsibilities. The CITY will maintain those portions of the SYSTEM within the area described in the EASEMENT DOCUMENT as "Dedicated to the City of Crystal Lake" up to and including the inlet, but not including the lateral pipe connection to the remainder of the SYSTEM or any water quality treatment BMP's. For areas outside the roadway structure and in the parkway, the CITY's duties will include all necessary work up to and including the backfill stage in the event of repair and replacement work on the SYSTEM. For areas within the roadway structure, the CITY's duties will include all necessary work up to and including the surface of the pavement.

7. Agreement Running with the Land. This Agreement is to run with the land and shall be binding upon and inure to the benefit of the RESPONSIBLE PARTY, their successors, and assigns.

Approved By:
City of Crystal Lake

By:_____
(Signature)

Date:_____

Name:_____
(Print)

Title:_____
(Print)

Accepted By:
Responsible Party

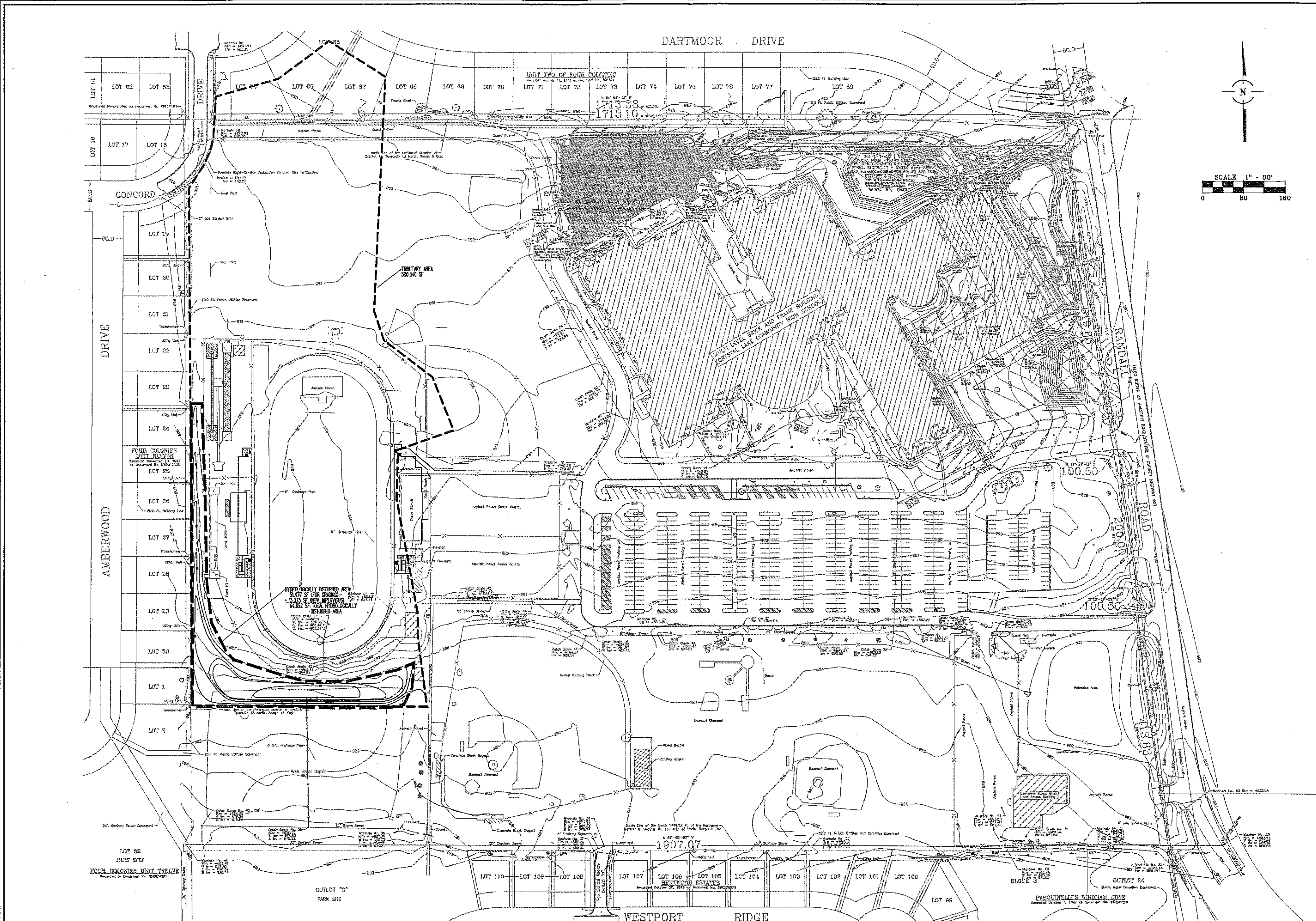
By:_____
(Signature)

Date:_____

Name:_____
(Print)

Representing:_____
(Print)

Exhibit A


DARTMOOR DRIVE
UNIT TWO OF FOUR COLONIES
LOT 61
LOT 62
LOT 63
LOT 65
LOT 67
LOT 68
LOT 69
LOT 70
LOT 71
LOT 72
LOT 73
LOT 74
LOT 75
LOT 76
LOT 77
1713.38
1713.10
LOT 18
LOT 17
LOT 19
CONCORD
LOT 20
LOT 21
LOT 22
LOT 23
LOT 24
LOT 25
LOT 26
LOT 27
LOT 28
LOT 29
LOT 30
LOT 1
LOT 2
AMBERWOOD
DRIVE
FOUR COLONIES UNIT ELEVEN
TRIBUTARY AREA
500,540 SF
MULTI LEVEL BRICK AND FRAME BUILDING
CRYSTAL LAKE COMMUNITY HIGH SCHOOL
RANDALL
ROAD
100.50
200.00
413.89
N
SCALE 1" = 80'
0
80
160
LOT 82
PARK SITE
FOUR COLONIES UNIT TWELVE
OUTLOT "C"
PARK SITE
1907.07
LOT 110
LOT 109
LOT 108
LOT 107
LOT 106
LOT 105
LOT 104
LOT 103
LOT 102
LOT 101
LOT 100
LOT 99
LOT 98
BRENTWOOD ESTATES
BLOCK 3
OUTLOT 24
PASQUINELLI'S WINDHAM COVE
WESTPORT
RIDGE

NO.	DATE	REMARKS

NO.	DATE	REMARKS

STORMWATER AREAS EXHIBIT

CRYSTAL LAKE SOUTH HIGH SCHOOL
OUTDOOR BLEACHERS
CRYSTAL LAKE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
SPACECO INC.

FILENAME:

DATE:
01/22/15

JOB NO.
6934.10

SHEET
EX A
1 OF 1

DRAFT

22 SPACES

8 SPACES

28 SPACES

58 TOTAL
OVERFLOW
SPACES

SITE IMPROVEMENT PLANS
for

CRYSTAL LAKE SOUTH HIGH SCHOOL OUTDOOR BLEACHERS

CRYSTAL LAKE, ILLINOIS

PROJECT NO:6934.10

2015 63
RECEIVED
DEC 03 2015
BY:

CRYSTAL LAKE SOUTH HIGH SCHOOL
OUTDOOR BLEACHERS

CALL J.U.L.I.E. 1-800-892-0123
WITH THE FOLLOWING:
COUNTY McHENRY
CITY, TOWNSHIP CRYSTAL LAKE, ALGONQUIN TWN
SEC. & ¼ SEC. NO.

48 HOURS BEFORE YOU DIG.
EXCLUDING SAT., SUN. & HOLIDAYS

NOTE:

SPACECO, INC. IS TO BE NOTIFIED AT LEAST THREE (3) DAYS PRIOR TO STARTING CONSTRUCTION AND SHALL BE INCLUDED IN THE PRECONSTRUCTION MEETINGS

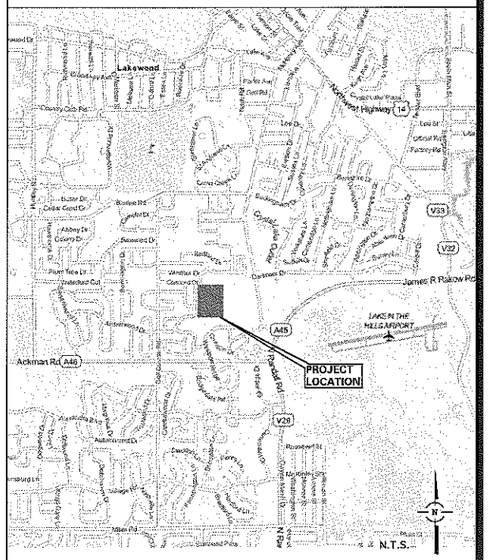
REVISIONS

ORIGINAL PLAN DATE: DECEMBER 19, 2014

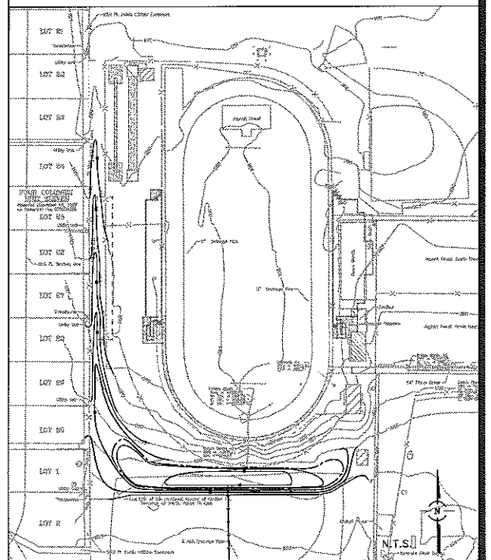
#	SHEET #	REMARKS	DATE
1	3-9	PER CITY COMMENTS	01/22/15
2	ALL	PER CRYSTAL LAKE HS	11/23/15

INDEX

LOCATION MAP



KEY MAP



11/23/15
ENGINEER DATE
THOMAS McCABE, JR., P.E.
ILLINOIS REGISTRATION NO.: 062-044159
EXPIRATION DATE: 11/30/2015

PROFESSIONAL DESIGN FIRM NO.: 184-001157
EXPIRATION DATE: 04/30/2015

THESE PLANS OR ANY PART THEREOF SHALL BE CONSIDERED VOID WITHOUT THE SIGNATURE, SEAL, AND EXPIRATION DATE OF SEAL OF THE ENGINEER

THOMAS McCABE, JR. 44159 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

SPACECO INC.

FILENAME: 6934.10TITLE
DATE: 12/19/14
JOB NO. 6934.10
SHEET C1
1 OF 9

GENERAL NOTES

1. REFERENCED CODES

A. ALL PAVEMENT AND STORM SEWER CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (SSRBC), AND SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS; ADOPTED JANUARY 1, 2012 BY ILLINOIS DEPARTMENT OF TRANSPORTATION AND ALL AMENDMENTS THERETO; AND IN ACCORDANCE WITH THE LATEST EDITION OF THE CODE OF THE MUNICIPALITY; EXCEPT AS MODIFIED HEREIN. IN CASE OF CONFLICT, MUNICIPAL CODE SHALL TAKE PRECEDENCE.

B. ALL SANITARY SEWER AND WATERMAIN CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, PUBLISHED JULY 2009, AND IN ACCORDANCE WITH THE CODE OF THE MUNICIPALITY; EXCEPT AS MODIFIED HEREIN OR BY ANY PUBLIC AGENCY PERMITS ISSUED FOR THIS WORK, IN CASE OF CONFLICT, THE MORE RESTRICTIVE PROVISIONS SHALL APPLY.

C. ALL SIDEWALK AND PUBLIC AREAS MUST BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ADA, ILLINOIS HANDICAP ACCESSIBILITY AND ANY APPLICABLE LOCAL ORDINANCES. WHEN CONFLICTS EXIST BETWEEN THE GOVERNING AGENCIES, THE MORE STRINGENT SHALL GOVERN.

D. THE CITED STANDARD SPECIFICATIONS, CODES AND PERMITS, WITH THESE CONSTRUCTION PLANS AND DETAILS, ARE ALL TO BE CONSIDERED PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE CONSIDERED A PART OF THIS CONTRACT.

2. UTILITY LOCATIONS

A. THE UTILITY COMPANIES HAVE BEEN CONTACTED IN REFERENCE TO UTILITIES THEY OWN AND OPERATE WITHIN THE LIMITS FOR THIS PROJECT. DATA FROM THESE AGENCIES HAS BEEN INCORPORATED INTO THE PLANS. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM OR ESTABLISH THE EXISTENCE OF ALL UTILITY FACILITIES AND THEIR EXACT LOCATIONS, AND TO SAFELY SCHEDULE ALL UTILITY RELOCATIONS. FOR ADDITIONAL INFORMATION, THE AGENCIES LISTED ON THIS SHEET MAY BE CONTACTED.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES. THE ENGINEER DOES NOT WARRANT THE LOCATION OF ANY EXISTING UTILITIES SHOWN ON THE PLAN. THE CONTRACTOR SHALL CALL J.U.L.I.E. AT 800-892-0123 AND THE MUNICIPALITY, FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND THE MUNICIPALITY TWENTY-FOUR (24) HOURS PRIOR TO STARTING ANY CONSTRUCTION.

C. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT WITH LOCATIONS OF THE NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.

3. UTILITY COORDINATION

A. OWNER SHALL OBTAIN EASEMENTS AND PERMITS NECESSARY TO FACILITATE CONSTRUCTION OF THE PROPOSED UTILITIES. THE CONTRACTOR, HOWEVER, SHALL FURNISH ALL REQUIRED BONDS AND EVIDENCE OF INSURANCE NECESSARY TO SECURE THESE PERMITS.

B. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE NATURE AND STATUS OF ALL UTILITY RELOCATION WORK PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ENSURE THAT CONSTRUCTION OPERATIONS DO NOT INTERFERE WITH UTILITY FACILITIES AND RELOCATION WORK. THE SCHEDULE SHOULD REFLECT CONSTRUCTION SEQUENCING WHICH COORDINATES WITH ALL UTILITY RELOCATION WORK. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST THE ORDER OF ITS WORK FROM TIME TO TIME, TO COORDINATE SAME WITH UTILITY RELOCATION WORK, AND SHALL PREPARE REVISED SCHEDULE(S) IN COMPLIANCE THEREWITH AS DIRECTED BY THE OWNER.

C. THE OWNER AND THE ENGINEER SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY OPERATION REQUIRING COOPERATION WITH OTHERS. AT&T SHALL BE CONTACTED ONE MONTH PRIOR TO START OF CONSTRUCTION IN ITS UTILITY AREAS. ALL OTHER AGENCIES, UNLESS OTHERWISE NOTED, SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR TEN (10) DAYS PRIOR TO THE START OF ANY SUCH OPERATION.

4. NO PLAN SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED "FOR CONSTRUCTION". PRIOR TO COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THE WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE ENGINEER'S LINE AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES WITH WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE MUST IMMEDIATELY REPORT SAME TO ENGINEER BEFORE DOING ANY WORK, OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTIONS ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.

5. ALL PROPOSED ELEVATIONS SHOWN ON THE PLANS ARE FINISHED SURFACE ELEVATIONS, UNLESS OTHERWISE SPECIFIED.

6. UPON AWARDING OF THE CONTRACT, AND WHEN REQUIRED BY THE MUNICIPALITY OR OWNER, THE CONTRACTOR SHALL FURNISH A LABOR, MATERIAL AND PERFORMANCE BOND IN THE AMOUNT REQUIRED GUARANTEEING COMPLETION OF THE WORK. THE UNDERWRITER SHALL BE ACCEPTABLE TO THE MUNICIPALITY OR OWNER, AS APPROPRIATE.

7. THE CONTRACTORS SHALL PLAN THEIR WORK BASED ON THEIR OWN BORINGS, EXPLORATIONS AND OBSERVATIONS TO DETERMINE SOIL CONDITIONS AT THE LOCATION OF THE PROPOSED WORK. HOWEVER, IF THE OWNER HAS A SOILS REPORT, THE RESULTS WILL BE AVAILABLE FROM THE OWNER UPON WRITTEN REQUEST.

8. CONTRACTOR SHALL VIDEO TAPE WORK AREA PRIOR TO CONSTRUCTION FOR THE PURPOSE OF DOCUMENTING EXISTING CONDITIONS.

9. COMMENCING CONSTRUCTION

A. THE CONTRACTOR SHALL NOTIFY THE OWNER AND/OR HIS REPRESENTATIVE AND THE AFFECTED GOVERNMENTAL AGENCIES IN WRITING AT LEAST THREE FULL WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL NOTIFY AS NECESSARY, ALL TESTING AGENCIES, EITHER MUNICIPALITY'S OR THE OWNER'S, SUFFICIENTLY IN ADVANCE OF CONSTRUCTION. ALL MATERIAL TESTING SHALL BE THE RESPONSIBILITY AND EXPENSE OF THE CONTRACTOR. THE TESTING AGENCY SHALL MEET THE APPROVAL OF THE OWNER.

B. FAILURE OF CONTRACTOR TO ALLOW PROPER NOTIFICATION TIME WHICH RESULTS IN TESTING COMPANIES TO BE UNABLE TO VISIT SITE AND PERFORM TESTING WILL CAUSE CONTRACTOR TO SUSPEND OPERATION (PERTAINING TO TESTING) UNTIL TESTING AGENCY CAN SCHEDULE TESTING OPERATIONS. COST OF SUSPENSION OF WORK TO BE BORNE BY CONTRACTOR.

10. ALL CONTRACTORS SHALL KEEP ACCESS AVAILABLE AT ALL TIMES FOR ALL TYPES OF TRAFFIC. AT NO TIME SHALL ACCESS BE DENIED TO ADJACENT PROPERTIES.

11. THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES UNTIL THEY ARE NO LONGER NEEDED. ANY STAKES DESTROYED OR DISTURBED BY THE CONTRACTOR PRIOR TO THEIR USE SHALL BE RESET BY THE DEVELOPER'S ENGINEER AT CONTRACTOR'S COST.

12. ANY EXISTING SIGNS, LIGHT STANDARDS AND UTILITY POLES WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND NOT NOTED FOR DISPOSAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT HIS OWN EXPENSE AS SHOWN ON THE ENGINEERING PLANS OR AS DIRECTED BY THE DEVELOPER. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE SATISFACTION OF THE OWNER. ANY SIGNS NOT REQUIRED TO BE RESET, SHALL BE DELIVERED TO THE RESPECTIVE OWNERS.

13. REMOVAL OF SPECIFIED ITEMS, INCLUDING BUT NOT LIMITED TO, PAVEMENT, SIDEWALK, CURB, CURB AND GUTTER, CULVERTS, ETC. SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE. HE IS RESPONSIBLE FOR ANY PERMIT REQUIRED FOR SUCH DISPOSAL.

14. ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM OR SHALL BE RESTORED TO PROPER OPERATING CONDITION. A RECORD OF THE LOCATION OF ALL FIELD TILE OR DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND TURNED OVER TO THE ENGINEER, DEVELOPER OR MUNICIPAL ENGINEER UPON COMPLETION OF THE PROJECT. THE COST OF THIS WORK SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

15. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY ON THE JOB.

16. THE CONTRACTOR SHALL COLLECT AND REMOVE ALL CONSTRUCTION DEBRIS, EXCESS MATERIALS, TRASH, OIL AND GREASE RESIDUE, MACHINERY, TOOLS AND OTHER MISCELLANEOUS ITEMS WHICH WERE NOT PRESENT PRIOR TO PROJECT COMMENCEMENT AT NO ADDITIONAL EXPENSE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY AND ALL PERMITS NECESSARY FOR THE HAULING AND DISPOSAL REQUIRED FOR CLEAN-UP AS DIRECTED BY THE ENGINEER OR OWNER. BURNING ON THE SITE IS NOT PERMITTED.

17. ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT AND PARKWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS SPECIFICALLY NOTED ON THE PLANS.

18. TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND SHALL BE PROTECTED UNDER THE PROVISIONS OF (SSRBC) ARTICLE 201.05.

19. LIMB PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF THE LANDSCAPE ARCHITECT MEETING THE OWNER'S APPROVAL AND SHALL BE UNDERTAKEN IN A TIMELY FASHION SO AS NOT TO INTERFERE WITH CONSTRUCTION.

20. ALL LIMBS, BRANCHES, AND OTHER DEBRIS RESULTING FROM THIS WORK SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE OFF-SITE.

21. ALL CUTS OVER 1" IN DIAMETER SHALL BE MADE FLUSH WITH THE NEXT LARGE BRANCH. WOUNDS OVER 1" IN DIAMETER SHALL BE PAINTED WITH AN APPROVED TREE PAINT.

22. GENERAL EXCAVATION/UNDERGROUND NOTES

A. SLOPE SIDES OF EXCAVATIONS TO COMPLY WITH CODES AND ORDINANCES HAVING JURISDICTION. SHORE AND BRACE WHERE SLOPING IS NOT POSSIBLE EITHER BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL EXCAVATED. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN A SAFE CONDITION UNTIL COMPLETION OF BACKFILLING.

B. PROVIDE MATERIALS FOR SHORING AND BRACING, SUCH AS SHEET PILING, UPRIGHTS, STRINGERS AND CROSS BRACES, IN GOOD SERVICEABLE CONDITION. PROVIDE MINIMUM REQUIREMENTS FOR TRENCH SHORING AND BRACING TO COMPLY WITH CODES AND AUTHORITIES HAVING JURISDICTION. MAINTAIN SHORING AND BRACING IN EXCAVATIONS REGARDLESS OF TIME PERIOD EXCAVATIONS WILL BE OPEN. CARRY DOWN SHORING AND BRACING AS EXCAVATION PROGRESSES IN ACCORDANCE WITH OSHA AND GOVERNING AUTHORITY.

C. PREVENT SURFACE WATER AND SUBSURFACE OR GROUNDWATER FROM FLOWING INTO EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. PROVIDE AND MAINTAIN PUMPS, SUMPS, SUCTION AND DISCHARGE LINES AND OTHER DEWATERING SYSTEM COMPONENTS NECESSARY TO CONVEY WATER AWAY FROM EXCAVATIONS. CONVEY WATER REMOVED FROM EXCAVATIONS AND RAINWATER TO COLLECTING OR RUN-OFF AREAS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. PROVIDE AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS FOR EACH STRUCTURE. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.

D. IMMEDIATELY REPORT CONDITIONS THAT MAY CAUSE UNSOUND BEARING TO THE OWNER/DEVELOPER BEFORE CONTINUING WORK.

23. FINAL ACCEPTANCE

A. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR AND HIS SURETY FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF FINAL ACCEPTANCE OF THE PROJECT AND THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DEFECTS IN MATERIALS AND WORKMANSHIP OF WHATEVER NATURE DURING THAT PERIOD. THIS GUARANTEE SHALL BE PROVIDED IN THE FORM OF MAINTENANCE BOND IN THE AMOUNT OF 10% OF THE COST OF IMPROVEMENTS.

B. BEFORE ACCEPTANCE BY THE OWNER AND FINAL PAYMENT, ALL WORK SHALL BE INSPECTED BY THE OWNER OR HIS REPRESENTATIVE. FINAL PAYMENT WILL BE MADE AFTER ALL THE CONTRACTOR'S WORK HAS BEEN APPROVED AND ACCEPTED.

C. NO UNDERGROUND WORK SHALL BE COVERED UNTIL IT HAS BEEN APPROVED BY THE MUNICIPALITY. APPROVAL TO PROCEED MUST BE OBTAINED FROM THE MUNICIPALITY PRIOR TO INSTALLING PAVEMENT BASE, BINDER, SURFACE, AND PRIOR TO PLACING ANY CONCRETE AFTER FORMS HAVE BEEN SET.

D. AT THE CLOSE OF EACH WORKING DAY AND AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS.

24. UNDERGROUND NOTES

A. UNDERGROUND WORK SHALL INCLUDE TRENCHING, INSTALLATION OF PIPE, CASTINGS, STRUCTURES, BACKFILLING OF TRENCHES AND COMPACTION AND TESTING AS SHOWN ON THE CONSTRUCTION PLANS. FITTINGS AND ACCESSORIES NECESSARY TO COMPLETE THE WORK MAY NOT BE SPECIFIED, BUT SHALL BE CONSIDERED AS INCIDENTAL TO THE COST OF THE CONTRACT.

B. WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, EXISTING DRAINAGE STRUCTURES AND SYSTEMS SHALL BE CLEANED OF DEBRIS AND PATCHED AS NECESSARY TO ASSURE INTEGRITY OF THE STRUCTURE. THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STRUCTURES AND CONTRACT UNIT PRICE PER LINEAL FOOT FOR SYSTEMS WHICH SHALL BE PAYMENT IN FULL FOR CLEANING, PATCHING, REMOVAL AND DISPOSAL OF DEBRIS AND DIRT. DRAINAGE STRUCTURES AND SYSTEMS CONSTRUCTED AS PART OF THIS PROJECT SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS EXPENSE. NO PAYMENT WILL BE MADE FOR CLEANING STRUCTURES OR SYSTEMS CONSTRUCTED AS PART OF THIS PROJECT.

C. ANY DEWATERING OF SEWER AND WATER TRENCHES AS WELL AS TEMPORARY SHEETING OR BRACING THAT MAY BE REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL NOT BE CONSIDERED EXTRA WORK UNLESS THERE IS A SPECIFIC LINE ITEM FOR DEWATERING. IN THE EVENT THAT SOFT MATERIALS WITH UNCONFINED COMPRESSIVE STRENGTH LESS THAN 0.5 TSF ARE ENCOUNTERED IN SEWER CONSTRUCTION, THE CONTRACTOR SHALL (UPON APPROVAL OF THE OWNER AND/OR ENGINEER) OVER-EXCAVATE TO A DEPTH OF ONE (1) FOOT BELOW THE BOTTOM OF THE PIPE AND BACKFILL WITH COMPACTED CRUSHED STONE, PROPERLY FORMED TO FIT THE BOTTOM OF THE PIPE.

D. TRENCH BACKFILL WILL BE REQUIRED FOR THE FULL TRENCH DEPTH WITHIN TWO (2) FEET OF PROPOSED OR EXISTING PAVEMENTS, UTILITIES, DRIVEWAYS, AND SIDEWALKS AND EXTENDING A DISTANCE EQUAL TO A 1:1 SLOPE FROM SUBGRADE ELEVATION TO TOP OF PIPE. THE TRENCH BACKFILL SHALL CONSIST OF GRANULAR MATERIAL MEETING IDOT CA-6 GRADATION. THE TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH (SSRBC) SPECIFICATIONS. JETTING WITH WATER SHALL NOT BE PERMITTED. THE COST OF SUCH CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THIS CONTRACT AND SHALL BE INCLUDED IN THE UNIT PRICE OF THE PIPE. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.

E. THE CONTRACTOR SHALL INSTALL A 4" X 4" X 8' (NOMINAL) POST AT THE TERMINUS OF THE SANITARY, WATER AND STORM SERVICE, SANITARY AND STORM MANHOLES, CATCH BASINS, INLETS AND WATER VAULTS. THE POST SHALL EXTEND 4' ABOVE THE GROUND. THE TOP 12" OF SAID POST SHALL BE PAINTED AS FOLLOWS: SANITARY – RED, WATERMAIN – BLUE, STORM – GREEN.

F. AFTER THE STORM SEWER SYSTEM HAS BEEN CONSTRUCTED, THE CONTRACTOR SHALL PLACE EROSION CONTROL AT REAR YARD INLET LOCATIONS, AND AT OTHER LOCATIONS SELECTED BY THE ENGINEER, TO MINIMIZE THE AMOUNT OF SILTATION WHICH NORMALLY WOULD ENTER THE STORM SEWER SYSTEM.

G. HYDRANTS SHALL NOT BE FLUSHED DIRECTLY ON THE ROAD SUBGRADES. WHENEVER POSSIBLE, HOSES SHALL BE USED TO DIRECT THE WATER INTO LOT AREAS OR THE STORM SEWER SYSTEM (IF AVAILABLE). DAMAGE TO THE ROAD SUBGRADE OR LOT GRADING DUE TO EXCESSIVE WATER SATURATION AND/OR EROSION FROM HYDRANT FLUSHING, OR FROM LEAKS IN THE WATER DISTRIBUTION SYSTEM, WILL BE REPAIRED BY THE CONTRACTOR AT HIS COST.

H. ALL TOP OF FRAMES FOR STORM AND SANITARY SEWERS AND VALVE VAULT COVERS ARE TO BE ADJUSTED TO MEET FINAL FINISH GRADE. THIS ADJUSTMENT IS TO BE MADE BY THE SEWER AND WATER CONTRACTOR AND THE COST IS TO BE CONSIDERED INCIDENTAL. THESE ADJUSTMENTS TO FINISHED GRADE WILL NOT ALLEVIATE THE CONTRACTOR FROM ANY ADDITIONAL ADJUSTMENTS AS REQUIRED BY THE MUNICIPALITY UPON FINAL INSPECTION OF THE PROJECT. (FINAL GRADES TO BE DETERMINED BY THE MUNICIPALITY AT THE TIME OF FINAL INSPECTION AND MAY VARY FROM PLAN GRADE.)

I. SLEEVES FOR UTILITY (COMED, TELEPHONE, ETC.) STREET CROSSING, SHALL BE INSTALLED WHERE DIRECTED BY THE OWNER. SLEEVES SHALL BE 6" PVC INSTALLED 36" BELOW THE TOP OF CURB AND EXTEND TWO FEET OUTSIDE THE CURB. TRENCH SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL.

J. THE CONTRACTOR SHALL VERIFY THE SIZE AND INVERT ELEVATION OF ALL CONNECTIONS TO AVOID ANY CONFLICTS BEFORE STARTING WORK. NOTIFY OWNER OF ANY DISCREPANCIES.

25. IT SHALL BE UNDERSTOOD THAT NEITHER THE MUNICIPALITY, ITS OFFICIALS, CONSULTANTS, NOR ITS EMPLOYEES ARE AGENTS OF OR REPRESENTATIVES OF THE OWNER. NONE-THE-LESS, THE MUNICIPALITY, ITS OFFICIALS AND EMPLOYEES ARE TO BE PROVIDED SAFE ACCESS TO ALL PHASES OF ALL WORK PERFORMED ON THE PROJECT SITE TO MONITOR THE QUALITY OF THE WORK AND ASSURE ITS CONFORMITY WITH THE PLANS AND SPECIFICATIONS. THERE SHALL BE NO PERSONAL LIABILITY UPON ANY OFFICIAL OR EMPLOYEE OF THE MUNICIPALITY ON ACCOUNT OF ACTIONS TAKEN OR NOT TAKEN IN THE COURSE OF THEIR WORK. THE CONTRACTOR MUST AT ALL TIMES MAINTAIN A SAFE ACCESS TO THE WORK FOR INSPECTORS. "SAFE" : MEANING CONDITIONS COMPLYING WITH ALL PROVISIONS OF ALL APPLICABLE AND RECOGNIZED SAFETY STANDARDS, FEDERAL, STATE AND LOCAL. IF ACCESS IS NOT SAFE AND INSPECTIONS CANNOT BE MADE UNDER SAFE CONDITIONS, THE INSPECTOR CAN ORDER CESSATION OF THE WORK SO AFFECTED UNTIL SUCH TIME AS CONTRACTOR PROVIDES SAFE ACCESS.

26. DRAIN TILE NOTES

A. "DRAIN TILE SYSTEMS DISTURBED DURING DEVELOPMENT MUST BE RECONNECTED BY THE RESPONSIBLE FOR THEIR DISTURBANCE UNLESS THE APPROVED ENGINEERING PLANS INDICATE HOW THE DRAIN TILE SYSTEM IS TO BE CONNECTED TO THE PROPOSED STORMWATER MANAGEMENT SYSTEM. ALL ABANDONED TILE SHALL BE REMOVED IN THEIR ENTIRETY.

LEGEND

EXISTING	DESCRIPTION	PROPOSED
—▷——▷—	DRAIN TILE	
—)——)—	STORM SEWER	—)——)—
—>——>—	SANITARY SEWER	—>——>—
—»——»—	SANITARY TRUNK SEWER	—»——»—
-W—— 8" –	WATER MAIN (WITH SIZE)	-W—— 8"-
	PIPE TRENCH BACKFILL	▨
—G——G—	GAS MAIN	—G——G—
—T——T—	TELEPHONE LINES	—T——T—
—E——E—	ELECTRIC LINE	—E——E—
——X——	FENCE	——X——
—— — — —	RIGHT-OF-WAY	—— — — —
- - - - - - -	EASEMENT	- - - - - - - -
————	PROPERTY LINE	————
—— —— ——	SETBACK LINE	—— —— ——
—— - —— -	CENTERLINE	—— - —— -
----680----	CONTOUR	—680—
◎	SANITARY MANHOLE	○
⊖	STORM MANHOLE	⊙
⊘	CATCH BASIN	●
▤	INLET	■
ɑ	FIRE HYDRANT	◀
	PRESSURE CONNECTION	◉
	PIPE REDUCER	▶
⊖ ◉	VALVE AND VAULT, VALVE	◓
◁	FLARED END SECTION	◀
⌧	STREET LIGHT	✖
-○-	UTILITY POLE	-●-
▲	CONTROL POINT	
┤	SIGN	┫
XXX.XX	SPOT ELEVATION	XXX.XX
⌖	SOIL BORING	◆
	OVERLAND FLOW ROUTE	➡
	DRAINAGE SLOPE	~► OR —►—
—□——□—	GUARDRAIL	—□——□—
⁓ … ⁓	WATER'S EDGE	⁓ … ⁓
▭	CONCRETE	▨
	REVERSE PITCH CURB	‖‖‖‖‖‖‖‖
✿ ✱ ○	TREE, FIR TREE, BUSH, & PROPOSED TREE TO REMOVE	⊠

ABBREVIATIONS

M - STORM MANHOLE
S - SANITARY MANHOLE
CB - CATCH BASIN
LP - LIGHT POLE
VV - VALVE VAULT
E - END SECTION
FH - FIRE HYDRANT
GR - GRADE RING (HYDRANT)
I - INVERT OR INLET
TF - TOP OF FOUNDATION
GF - GARAGE FLOOR
TC - TOP OF CURB
TD - TOP OF DEPRESSED CURB
TW - TOP OF RETAINING WALL
BW - BOTTOM OF RETAINING WALL
OP - OUTLET OF PIPE
T/P - TOP OF PIPE
B/P - BOTTOM OF PIPE
WM - WATERMAIN
SAN - SANITARY SEWER
STM - STORM SEWER
LO - LOOK OUT
PLO - PARTIAL LOOK OUT

PERMITS

DESCRIPTION	LOG NO.	PERMIT NO.	DATE ISSUED
CRYSTAL LAKE STORMWATER MANAGEMENT PERMIT			

PROJECT BENCHMARK

SNAITARY MANHOLE RIM SOUTH OF VISITOR PARKING
ELEVATION: 859.34 (NAVD88)

NO.	DATE	REMARKS

NO.	DATE	REMARKS
2	11/23/15	PER CRYSTAL LAKE HS

TYPICAL SECTIONS AND GENERAL NOTES

CRYSTAL LAKE SOUTH HIGH SCHOOL
OUTDOOR BLEACHERS
CRYSTAL LAKE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME:
6934.10GN

DATE:
12/19/14

JOB NO.
6934.10

SHEET
C2
2 OF 9

NO.	DATE	REMARKS

NO.	DATE	REMARKS
2	11/23/15	PER CRYSTAL LAKE HS
1	01/22/15	PER CITY

CRYSTAL LAKE SOUTH HIGH SCHOOL
OUTDOOR BLEACHERS
CRYSTAL LAKE, ILLINOIS

EXISTING CONDITIONS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
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SPACECO INC.

FILENAME: 6934.10ETOLDGN
DATE: 12/19/14
JOB NO. 6934.10
SHEET C3
3 OF 9

SCALE 1" = 40'
0 40 80

NOTE: TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS.

N

DRIVE

AMBERWOOD

LOT 22
LOT 23
LOT 24
LOT 25
LOT 26
LOT 27
LOT 28
LOT 29
LOT 30
LOT 1
LOT 2

FOUR COLONIES UNIT ELEVEN
Recorded November 10, 1987 as Document No. 87R009323

30.0 Ft. Building Line

10.0 Ft. Public Utilities Easement

20'. Sanitary Sewer Easement

East Line of the Northeast Quarter of Section 18, Township 43 North, Range 18 East

LOT 62
PARK SITE
FOUR COLONIES UNIT TWELVE
Recorded as Document No. 88R034271

LOT 110

Goal Post

Utility Unit

Transformer

Asphalt Paved

Pole Vault

Sand Pit

Long Jump

Grand Stands

Ticket Booth

6" Drainage Pipe

Asphalt Paved Tennis

Pavilion

Support Columns

Manhole 44
Rim = +889.91
T/P = 885.77

Catch Basin 43
Rim = +889.09
W. Inv. = 886.34
E. Inv. = 886.34
S. Inv. = 885.51

Catch Basin 45
Rim = +886.75
N. Inv. = 884.72
NE Inv. = 884.31
E. Inv. = 883.55

12" Storm Sewer

Catch Basin 42
Rim = +886.41
Inv. = 884.81

Concrete Walk

Asphalt Paved

8 Inch Drainage Pipe

Concrete Block Dugout

Baseball Diamond

Area Under Repair

Catch Basin No. 40
Rim = +880.69
S Inv = 878.34
E Inv = 878.29

Catch Basin No. 39
Rim = +880.72
W Inv = 878.92
E Inv = 878.92

12" Storm Sewer

30" Sanitary Sewer

Manhole No. 38
Rim = +881.60
W Inv. = 868.22
E Inv = 868.22
N Inv = 874.81

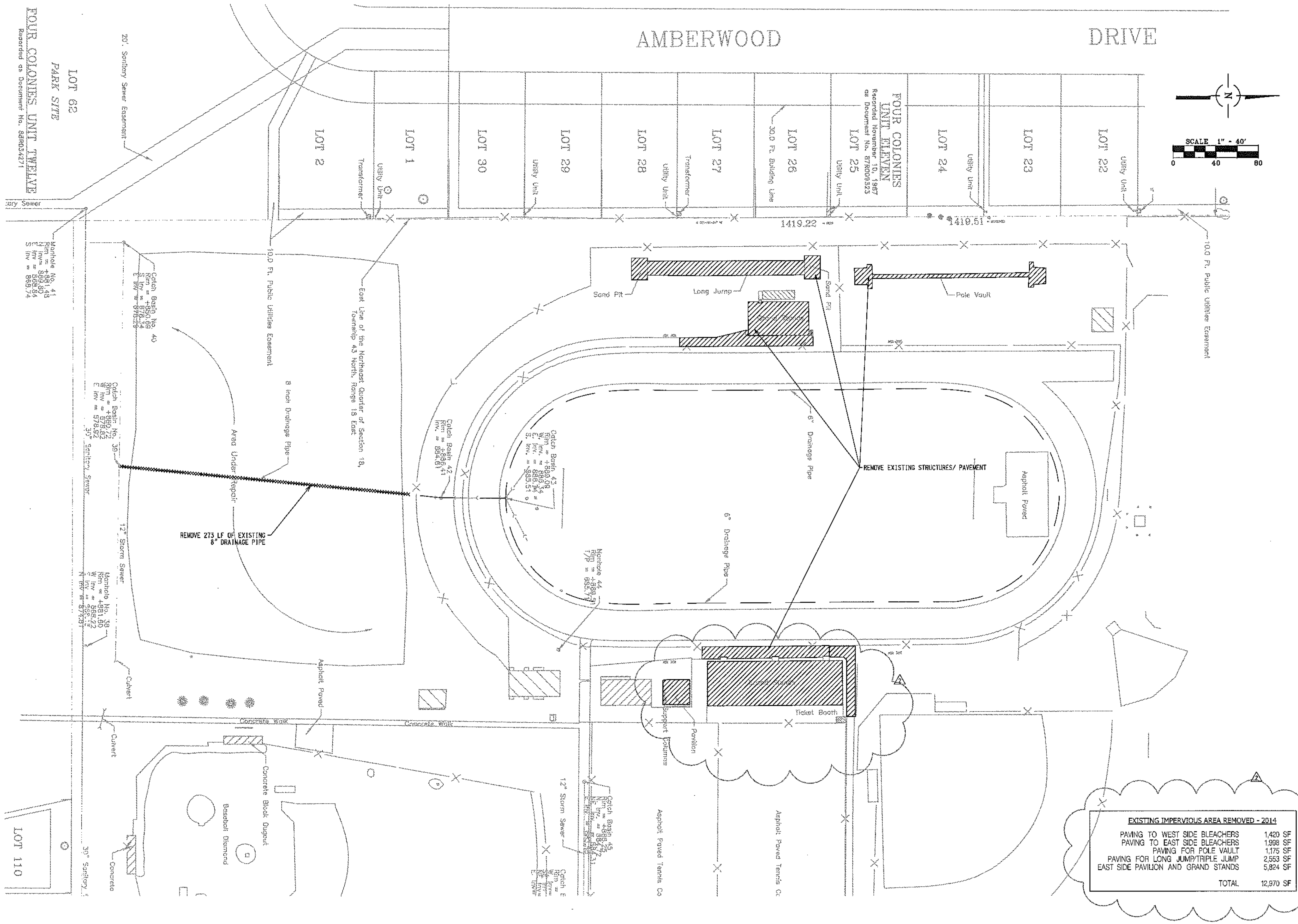
Culvert

Manhole No. 41
Rim = +881.46
N Inv= 869.80
E Inv = 868.84
S Inv = 868.74

Sanitary Sewer

Concret

30" Sanitar



AMBERWOOD DRIVE
FOUR COLONIES UNIT ELEVEN
Recorded November 10, 1967 as Document No. 87R009523
FOUR COLONIES UNIT TWELVE
Recorded as Document No. 88R034271
LOT 62
PARK SITE
LOT 2
LOT 1
LOT 30
LOT 29
LOT 28
LOT 27
LOT 26
LOT 25
LOT 24
LOT 23
LOT 22
LOT 110
SCALE 1" = 40'
0
40
80
20' Sanitary Sewer Easement
10.0 Ft. Public Utilities Easement
30.0 Ft. Building Line
East Line of the Northeast Quarter of Section 18, Township 43 North, Range 18 East
1419.22
1419.51
Long Jump
Sand Pit
Pole Vault
REMOVE EXISTING STRUCTURES/ PAVEMENT
REMOVE 273 LF OF EXISTING 8" DRAINAGE PIPE
8 Inch Drainage Pipe
6" Drainage Pipe
Area Under Repair
Asphalt Paved
12" Storm Sewer
30" Sanitary Sewer
Culvert
Concrete Walk
Ticket Booth
Pavilion
Support Columns
Concrete Block Dugout
Baseball Diamond
Asphalt Paved Tennis Co
Concrete
Transformer
Utility Unit

EXISTING IMPERVIOUS AREA REMOVED - 2014

PAVING TO WEST SIDE BLEACHERS	1,420 SF
PAVING TO EAST SIDE BLEACHERS	1,998 SF
PAVING FOR POLE VAULT	1,175 SF
PAVING FOR LONG JUMP/TRIPLE JUMP	2,553 SF
EAST SIDE PAVILION AND GRAND STANDS	5,824 SF
TOTAL	12,970 SF

NO.	DATE	REMARKS
2	11/23/15	PER CRYSTAL LAKE HS
1	01/22/15	PER CITY

DEMOLITION PLAN

CRYSTAL LAKE SOUTH HIGH SCHOOL OUTDOOR BLEACHERS

CRYSTAL LAKE, ILLINOIS

CONSULTING ENGINEERS
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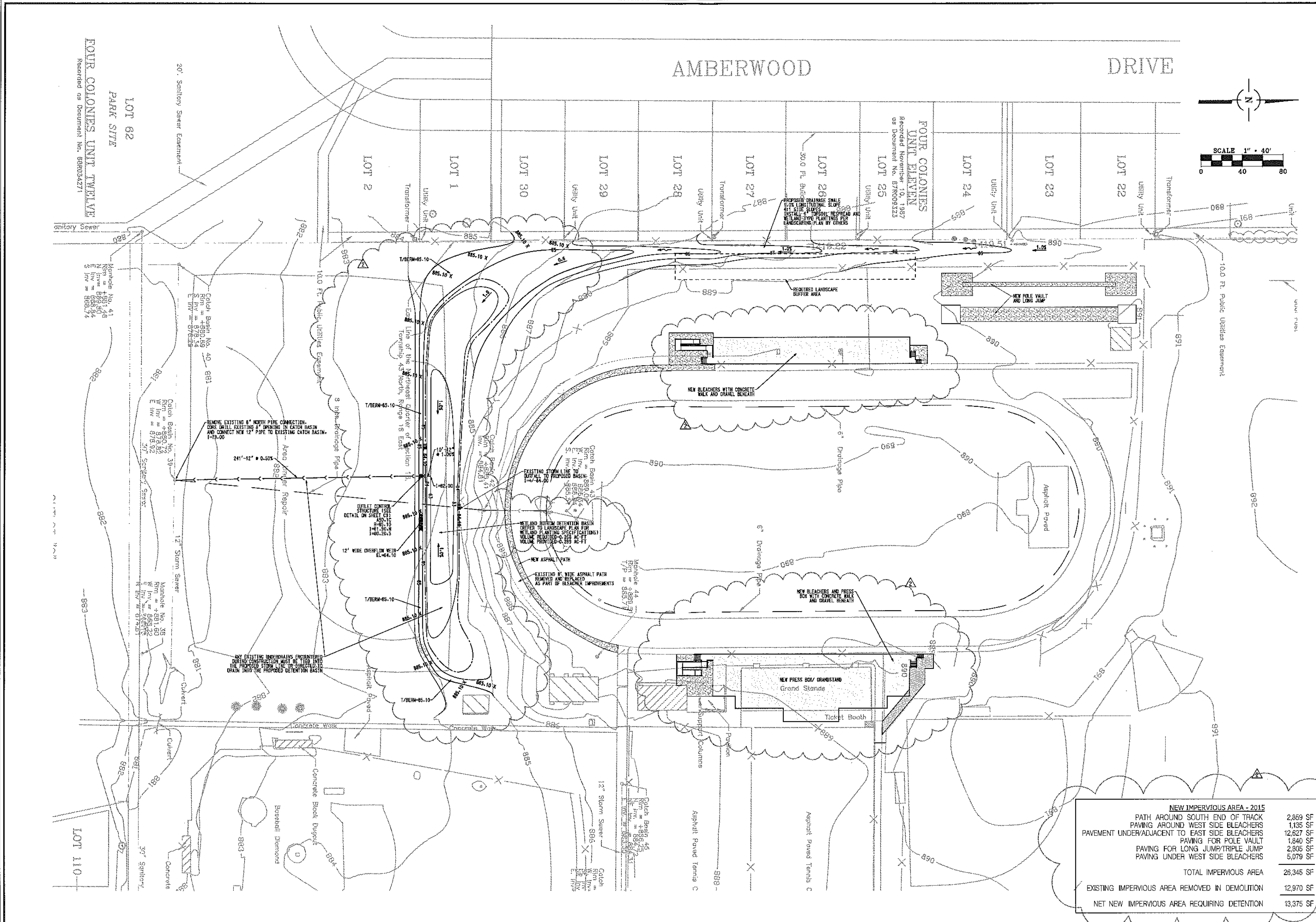
LAND SURVEYORS
9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
SPACECO INC.

FILENAME: 6934.10DEMO.DGN

DATE: 12/19/14

JOB NO. 6934.10

SHEET C4



NEW IMPERVIOUS AREA - 2015	
PATH AROUND SOUTH END OF TRACK	2,859 SF
PAVING AROUND WEST SIDE BLEACHERS	1,135 SF
PAVEMENT UNDER/ADJACENT TO EAST SIDE BLEACHERS	12,627 SF
PAVING FOR POLE VAULT	1,840 SF
PAVING FOR LONG JUMP/TRIPLE JUMP	2,805 SF
PAVING UNDER WEST SIDE BLEACHERS	5,079 SF
TOTAL IMPERVIOUS AREA	26,345 SF
EXISTING IMPERVIOUS AREA REMOVED IN DEMOLITION	12,970 SF
NET NEW IMPERVIOUS AREA REQUIRING DETENTION	13,375 SF

NO.	DATE	REMARKS
2	11/23/15	PER CRYSTAL LAKE HS
1	01/22/15	PER CITY

ENGINEERING PLAN

CRYSTAL LAKE SOUTH HIGH SCHOOL OUTDOOR BLEACHERS

CRYSTAL LAKE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
SPACECO INC.

FILENAME: 6934/10ENG.DGN

DATE: 12/19/14

JOB NO. 6934.10

SHEET C5

This Soil Erosion & Sediment Control (SESC) Plan has been prepared to fulfill one of the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit No. ILR10__________. The SESC Plan should be maintained on site as an integral component of the Storm Water Pollution Prevention Plan (SWPPP). The SWPPP, including the SESC Plan, should be amended whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the Waters of the State and which has not otherwise been addressed in the SWPPP. The SWPPP, shall also be amended if it proves to be ineffective in eliminating or significantly minimizing pollutants, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with construction site activity. In addition, the SWPPP shall be amended to identify any new contractor and/or subcontractor that will implement a measure of the SWPPP.

1. SITE DESCRIPTION

A. The following is a description of the nature of the construction activity: NEW BLEACHERS AND ASSOCIATED PAVEMENT, GRADING AND DETENTION AREA.

B. The following is a description of the intended sequence of construction activities which will disturb soils for major portions of the construction site:

1) Install perimeter sediment control measures
   a) Selective vegetation removal for silt fence installation
   b) Silt fence installation
   c) Construction fencing around areas not to be disturbed
   d) Stabilized construction entrance
2) Clear and grub (as necessary)
3) Construct sediment trapping devices
4) Construct detention facilities and outlet control structure with restrictor & temporary perforated riser
5) Strip topsoil, stockpile topsoil and grade site
6) Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
7) Install storm sewer and associated inlet & outlet protection
8) Permanently stabilize detention basins with seed and erosion control blanket
9) Permanently stabilize disturbed areas
10) Remove all temporary soil erosion and sediment control measures after the site is stabilized with vegetation

C. The site has a total acreage of approximately 59.95 acres. Construction activity will disturb approximately 1.694 acres of the site.

D. 1) An estimated runoff coefficient of the site after construction activities are completed is 0.7.
   2) Existing data describing the soil or quality of any discharge from the site is included in COUNTY SOILS MAPS.

E. Refer to Sheets C3,C5,C8 for a site plan indicating:
   1) drainage patterns;
   2) approximate slopes anticipated before and after major grading activities;
   3) locations where vehicles enter or exit the site and controls to minimize off-site sediment tracking;
   4) areas of soil disturbance;
   5) the location of major structural and nonstructural controls;
   6) the location of areas where stabilization practices are expected to occur;

F. 1) The name of the receiving water(s) is(are): FOX RIVER.
   2) The name of the ultimate receiving water is: FOX RIVER.
   3) The extent of wetland acreage at the site is 0 acres.

G. Potential sources of pollution associated with this construction activity may include:

- sediment from disturbed soils
- portable sanitary stations
- fuel tanks
- staging areas
- waste containers
- chemical storage areas
- oil or other petroleum products
- adhesives
- tar
- solvents
- detergents
- fertilizers
- raw materials (e.g., bagged portland cement)
- construction debris
- landscape waste
- concrete and concrete trucks
- litter

2. CONTROLS

This section of the SESC Plan addresses the various controls that should be implemented for each of the major construction activities described in the "Site Description" section. For each measure identified in the SWPPP, the contractor(s) or subcontractor(s) that will implement the measure should be identified. All contractors and subcontractors that are identified should be required to sign a copy of the certification statement from Part IV.F. of the ILR10 Permit (in accordance with Part VI.G. - Signatory Requirements, of the ILR10 Permit). All signed certification statements should be maintained in the SWPPP.

A. Approved State or Local Plans

The management practices, controls and other provisions contained in the SWPPP should be at least as protective as the requirements contained in the Illinois Environmental Protection Agency's (IEPA) and the United States Department of Agriculture's Natural Resource Conservation Service Illinois Urban Manual, 2012. Requirements specified in sediment and erosion control site plans or site permits or storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of a Notice of Intent (NOI) to be authorized to discharge under the ILR10 permit, incorporated by reference and are enforceable under the ILR10 permit even if they are not specifically included in a SWPPP required under the ILR10 permit. This provision does not apply to provisions of master plans, comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit that is issued for the construction site.

The soil erosion and sediment control measures for this site should meet the requirements of the following agencies:

- City of Crystal Lake

B. Control Implementation Schedule

Best Management Practices will be implemented on an as-needed basis to protect water quality. Perimeter controls of the site should be installed prior to soil disturbance (excluding soil disturbance necessary to install the controls), including demolition activities. Perimeter controls, including the silt fence, should be actively maintained until final stabilization of those portions of the site upward of the perimeter control. Stabilized construction entrance(s) and sediment traps should be installed as described in the intended sequence of construction activities. The contractor is responsible for the adequate protection (including sediment control) of existing sewers and sewer structures during construction operations. As necessary, the appropriate sediment control measure should be installed prior to land disturbing activities.

Stabilization measures should be initiated where construction activities have temporarily or permanently ceased. In accordance with Local and State requirements, as described below. Once construction activity in an area has permanently ceased, that area should be permanently stabilized. Temporary perimeter controls should be removed after final stabilization of those portions of the site upward of the perimeter control.

C. Erosion and Sediment Controls

The appropriate soil erosion and sediment controls should be implemented on site and should be modified to reflect the current phase of construction. All temporary sediment and erosion control measures should be repaired or replaced as soon as practicable to maintain NPDES compliance. Permittee or an authorized agent is responsible for inspecting all sediment and erosion control measures at a minimum of every 7 calendar days and within 24 hours, or one working day, of the end of a 0.5-inch (or greater) rain event.

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices should be installed to the Standard Practice. The contractor is responsible for the installation of any additional erosion and sediment control measures necessary to minimize erosion and sedimentation as determined by the Engineer or Primary Contact.

1) Stabilization Practices - Areas that will not be paved or covered with non-erosive material should be stabilized using procedures in substantial conformance with the Illinois Urban Manual. This SESC Plan includes site-specific soil erosion and sediment control measures. Additional erosion controls should be implemented as necessary, as determined by the Engineer or Primary Contact.

The following temporary and permanent stabilization practices, at a minimum, are proposed:

- permanent seeding
- temporary seeding
- erosion control blanket
- other measures

Site-specific scheduling of the implementation of these practices is included in the Soil Protection Chart. A record of the dates when major grading activities occur, when construction activities cease on a portion of the site, and when stabilization measures are initiated should be included in the SWPPP.

Stabilization of disturbed areas must be initiated within 1 working day of permanent or temporary cessation of earth activities and shall be completed as soon as possible but not later than 14 days from the initialization of stabilization work in an area. Exceptions to these time frames are specified below.

a. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.

b. On areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method can be used. Temporary stabilization techniques and materials shall conform to the SWPPP.

2) Structural Practices - Provided below is a description of structural practices that should be implemented, to the degree attainable to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Structural practices should be placed on upland soils to the degree practicable. The installation of the following devices may be subject to Section 404 of the Clean Water Act:

- stabilized construction entrance
- silt fence
- sediment traps (provide locations and dimensions in plan set)
- other measures

D. Storm Water Management

Provided below is a description of measures that will be installed during the construction process to control the pollutants in storm water discharges that will occur after the construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

1) The practices selected for implementation were determined on the basis of technical guidance contained in IEPA's Illinois Urban Manual, Federal, State, and/or Local Requirements. The storm water management measures include:

- detention basins (wet basins, dry basins, etc.)
- retention basins
- vegetated swales
- infiltration trenches
- other measures

2) Velocity dissipation devices, such as rip-rap aprons at flared end sections or level spreaders, shall be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a watercourse so that the natural, physical, and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

E. Waste Management

Solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed of off site by the contractor. The contractor is responsible to acquire the permit required for such disposal. Burning on site will not be permitted. No solid materials, including building materials, shall be discharged to Waters of the State, except as authorized by a Section 404 permit. All waste materials should be collected and stored in approved receptacles. No wastes should be placed in any location other than in the approved containers appropriate for the materials being discarded. There should be no liquid wastes deposited into dumpsters or other containers which may leak. Receptacles with deficiencies should be replaced as soon as possible and the appropriate clean-up procedure should take place, if necessary. Construction waste material is not to be buried on site. Waste disposal should comply with all Local, State, and Federal regulations.

On-site hazardous material storage should be minimized and stored in labeled, separate receptacles from non-hazardous waste. All hazardous waste should be disposed of in the manner specified by Local or State regulation or by the manufacturer.

F. Concrete Waste Management

Concrete waste or washout should not be allowed in the street or allowed to reach a storm water drainage system or watercourse. When practicable, a sign should be posted at each location to identify the washout. To the extent practicable, concrete washout areas should be located a reasonable distance from a storm water drainage inlet or watercourse, and should be located at least 10 feet behind the curb, if the washout area is adjacent to a paved road. A stabilized entrance that meets Illinois Urban Manual standards should be installed at each washout area.

The containment facilities should be of sufficient volume to completely contain all liquid and concrete waste materials including enough capacity for anticipated levels of rainwater. The dried concrete waste material should be picked up and disposed of properly when 66% capacity is reached. Hardened concrete can be properly recycled and used again on site (as approved by the Engineer) or hauled off site to an appropriate landfill.

G. Concrete Cutting

Concrete waste management should be implemented to contain and dispose of saw-cutting slurries. Concrete cutting should not take place during or immediately after a rainfall event. Waste generated from concrete cutting should be cleaned-up and disposed into the concrete washout facility as described above.

H. Vehicle Storage and Maintenance

When not in use, construction vehicles should be stored in a designated area(s) outside of the regulatory floodplain, away from any natural or created watercourse, pond, drainage-way or storm drain. Controls should be installed to minimize the potential of runoff from the storage area(s) from reaching storm drains or water courses. Vehicle maintenance (including both routine maintenance as well as on-site repairs) should be made within a designated area(s) to prevent the migration of mechanical fluids (oil, antifreeze, etc.) into watercourses, wetlands or storm drains. Drip pans or absorbent pads should be used for all vehicle and equipment maintenance activities that involve grease, oil, solvents, or other vehicle fluids. Construction vehicles should be inspected frequently to identify any leaks; leaks should be repaired immediately or the vehicle should be removed from site. Dispose of all used oil, antifreeze, solvents and other vehicle-related chemicals in accordance with United States Environmental Protection Agency (USEPA) and IEPA regulations and per Material Safety Data Sheet (MSDS) and/or manufacturer instructions. Contractors should immediately report spills to the Primary Contact.

I. Material Storage and Good Housekeeping

Materials and/or contaminants should be stored in a manner that minimizes the potential to discharge into storm drains or watercourses. An on-site area should be designated for material delivery and storage. All materials kept on site should be stored in their original containers with legible labels, and if possible, under a roof or other enclosure. Labels should be replaced if damaged or difficult to read. Bermed-off storage areas are an acceptable control measure to prevent contamination of storm water. MSDS should be available for referencing clean-up procedures. Any release of chemicals/contaminants should be immediately cleaned up and disposed of properly. Contractors should immediately report all spills to the Primary Contact, who should notify the appropriate agencies, if needed.

To reduce the risks associated with hazardous materials on site, hazardous products should be kept in original containers unless they are not re-sealable. The original labels and MSDS should be retained on site at all times. Hazardous materials and all other material on site should be stored in accordance with manufacturer or MSDS specifications. When disposing of hazardous materials, follow manufacturer or Local and State recommended methods.

The following good housekeeping practices should be followed on site during the construction project:

- An effort should be made to store only enough product required to do the job.
- All materials stored on site should be stored in a neat, orderly manner in their appropriate containers and adequately protected from the environment.
- Products should be kept in their original containers with the original manufacturer's label.
- Substances should not be mixed with one another unless recommended by the manufacturer.
- Operations should be observed as necessary to ensure proper use and disposal of materials on site.
- Whenever possible, all of a product should be used up before disposing of the container.
- Manufacturer's recommendations for proper use and disposal should be followed.

J. Management of Portable Sanitary Stations

To the extent practicable, portable sanitary stations should be located in an area that does not drain to any protected natural areas, Waters of the State, or storm water structures and should be anchored to the ground to prevent from tipping over. Portable sanitary stations located on impervious surfaces should be placed on top of a secondary containment device, or be surrounded by a control device (e.g., gravel-bag berm). The contractor should not create or allow unsanitary conditions. Sanitary waste should be disposed of in accordance with applicable State and/or Local regulations.

K. Spill Prevention and Clean-Up Procedures

Manufacturer's recommended methods for spill clean-up should be available and site personnel should be made aware of the procedures and the location of the information and clean-up supplies. Materials and equipment necessary for spill clean-up should be kept in the material storage area on site. Equipment and materials should include, but are not limited to, brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust and plastic and/or metal trash containers specifically for this purpose.

Discharges of a hazardous substance or oil caused by a spill (e.g., a spill of oil into a separate storm sewer or Waters of the State) are not authorized by the ILR10 permit. If a spill occurs, notify the Primary Contact immediately. The construction site should have the capacity to control, contain, and remove spills, if they occur. Spills should be cleaned up immediately (after discovery) in accordance with MSDS and should not be buried on site or washed into storm sewer drainage inlets, drainage-ways, or Waters of the State.

Spills in excess of Federal Reportable Quantities (as established under 40 CFR Parts 110, 117, or 302), should be reported to the National Response Center by calling (800) 424-8802. MSDS often include information on Federal Reportable Quantities for materials. Spills of toxic or hazardous materials should be reported to the appropriate State or Local government agency, as required. When cleaning up a spill, the area should be kept well ventilated and appropriate personal protective equipment should be used to minimize injury from contact with a hazardous substance.

In addition to the good housekeeping and other management practices discussed in the previous sections of these Notes, the following minimum practices should be followed to reduce the risk of spills:

- On-site vehicles should be monitored for leaks and should receive regular preventative maintenance to reduce the chance of leakage.
- Petroleum products should be stored in tightly sealed and clearly labeled containers.
- Contractors should follow the manufacturer's recommendations for proper use, storage, and disposal of materials. Excess materials should be disposed of according to the manufacturer's instructions or State and Local regulations, and should not be discharged to the storm sewer or waterbody.

L. De-Watering Operations

During de-watering/pumping operations, only uncontaminated water should be allowed to discharge to protected natural areas, Waters of the State, or to a storm sewer system (in accordance with Local permits). Inlet hoses should be placed in a stabilized sump pit or floated at the surface of the water in order to limit the amount of sediment intake. Pumping operations may be discharged to a stabilized area that consists of an energy dissipating device (e.g., stone), sediment filter bag, or both. Adequate erosion controls should be used during de-watering operations as necessary. Stabilized conveyance channels should be installed to direct water to the desired location as applicable. Additional control measures may be installed at the outlet area at the discretion of the Primary Contact or Engineer.

M. Off-Site Vehicle Tracking

The site should have one or more stabilized construction entrances in conformance with the Plan details. Stabilized construction entrance(s) should be installed to help reduce vehicle tracking of sediments. Streets should be swept as needed to reduce excess sediment, dirt, or stone tracked from the site. Maintenance may include top dressing the stabilized entrance with additional stone and removing top layers of stone and sediment, as needed. Vehicles hauling erodible material to and from the construction site should be covered with a tarp.

N. Topsoil Stockpile Management

If topsoil is to be stockpiled at the site, select a location so that it will not erode, block drainage, or interfere with work on site. Topsoil stockpiles should not be located in the 100-year floodplain or designated buffer protecting Waters of the State. During construction of the project, soil stockpiles should be stabilized or protected with sediment trapping measures. Perimeter controls, such as silt fence, should be placed around the stockpile immediately. Stabilization of the stockpile should be completed if the stockpile is to remain undisturbed for longer than fourteen days.

O. Dust Control

Dust control should be implemented on site as necessary. Repetitive treatment should be applied as needed to accomplish control when temporary dust control measures are used. A water truck should be present on site (or available) for sprinkling/irrigation to limit the amount of dust leaving the site. Watering should be applied daily (or more frequently) to be effective. Caution should be used not to overwater, as that may cause erosion.

If field observations indicate that additional protection from wind erosion (in addition to, or in place of watering) is necessary, alternative dust suppressant controls should be implemented at the discretion and approval of the Engineer and/or Primary Contact.

Street cleaning should also be used as necessary to control dust. Paved areas that have soil on them from the construction site should be cleaned as needed, utilizing a street sweeper or bucket-type endloader or scraper at the direction of the Engineer and/or Primary Contact.

3. MAINTENANCE

Maintenance of the controls incorporated into this project should be performed as needed to assure their continued effectiveness. This includes prompt and effective repair and/or replacement of deficient control measures. The following is a description of procedures that should be used to maintain, in good and effective operating condition, erosion and sediment control measures and other protective measures identified in the SESC Plan and Standard Specifications.

Dust control: When temporary dust control measures are used, repetitive treatment should be applied as needed to accomplish control.

Sediment filter bags: Sediment filter bags should be installed on pump outlet hoses that discharge off site or to sensitive on-site areas, and should be placed in an area that allows for the bag to be removed without producing a sediment discharge. The bags should be inspected frequently and repaired or replaced as needed.

Silt fence: Silt fences should be inspected regularly for undercutting where the fence meets the ground, overtopping, and tears along the length of the fence. Deficiencies should be repaired immediately. Remove accumulated sediments from the fence base when the sediment reaches one-half the fence height. During final stabilization, properly dispose of any sediment that has accumulated on the silt fence. Alternative sediment control measures should be considered for areas where silt fence continually fails.

Stabilized construction entrance: The stabilized construction entrances should be maintained to prevent tracking of sediment onto public streets. Maintenance includes top dressing with additional stone and removing top layers of stone and sediment. The sediment tracked onto the public right-of-way should be removed immediately.

Temporary sediment traps: Temporary sediment traps should be inspected after each period of significant rainfall. Remove sediment and restore the trap to its original dimensions when the sediment has accumulated to one-half the design depth of the permanent pool. Place the sediment that is removed in a designated disposal area. Check the structure for damage from erosion or piping. After all sediment-producing areas have been permanently stabilized, remove the structure and all unstable sediment. Grade the area to blend with the adjoining areas and stabilize properly.

4. INSPECTIONS

The Permittee (or their authorized representative) will be responsible for conducting site inspections in compliance with the ILR10 NPDES Permit. After each inspection, a report should be prepared by the qualified personnel who performed the inspection. The inspection report should be maintained on site as part of the SWPPP.

Inspections should be conducted at least once every seven calendar days and within 24 hours or by the end of the following work day, of the end of a storm event that is 0.5 inches or greater, or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activites are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

Each inspection should include the following components:

A. Disturbed areas and areas used for the storage of materials that are exposed to precipitation should be inspected for evidence of, or the potential for, pollutants entering the drainage system. The erosion and sediment control measures identified in the SWPPP should be observed to ensure that they have been installed and are operating correctly. Where discharge points are accessible, they should be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site should be inspected for off-site sediment tracking. All pumping operations and other potential non-storm water discharge sources should also be inspected.

B. Based on the results of the inspection, the description of potential pollutant sources identified, and the pollution prevention measures described in the SWPPP should be revised, as appropriate, as soon as practicable after the inspection. The modifications, if any, shall provide for timely implementation of any changes to the SWPPP within 7 calendar days following the inspection.

C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and actions taken in accordance with paragraph B. above should be made and retained as part of the SWPPP for at least three years from the date that permit coverage expires or is terminated. The report shall be signed in accordance with Part VI.G. (Signatory Requirements) of the ILR10 NPDES Permit.

D. The Permittee shall notify the appropriate agency field operations section office by e-mail at: epa.swnoncompl@illinois.gov, telephone or fax within 24 hours of any incidence of noncompliance for any violation of the storm water pollution prevention plan observed during any inspection conducted or for violation of any condition of this permit. The Permittee should complete and submit within 5 days an "Incidence of Non-Compliance" (ION) report for any violation of the SWPPP observed during an inspection conducted, including those not required by the SWPPP. Submission should be on forms provided by IEPA and include specific information on the cause of non-compliance, actions which were taken to prevent any further causes of non-compliance, and a statement detailing any environmental impact, which may have resulted from the non-compliance.

E. All reports of non-compliance shall be signed by a responsible authority as defined in Part VI.G. (Signatory Requirements), of the ILR10 NPDES Permit.

F. After the initial contact has been made within the appropriate agency field operations section office, all reports of non-compliance shall be mailed to IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

5. NON-STORM WATER DISCHARGES

Except for flows from fire fighting activities, possible sources of non-storm water that may be combined with storm water discharges associated with the proposed activity, are described below:

- Fire fighting activities
- Fire hydrant flushings
- Water used to wash vehicles where detergents are not used
- Water used to control dust
- Potable water sources including uncontaminated waterline flushings
- Landscape irrigation drainages
- Routine external building washdown which does not use detergents
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed) and where detergents have not been used.
- Uncontaminated air conditioning condensate
- Springs
- Irrigation ditches
- Uncontaminated ground water
- Foundation or footing drains where flows are not contaminated with process materials such as solvents

6. PROHIBITED NON-STORMWATER DISCHARGES

- Concrete and wastewater from washout of concrete (unless managed by an appropriate control)
- Drywall compound
- Wastewater from washout and cleanout of stucco, paint
- Form release oils
- Curing compounds and other construction materials
- Fuels, oils, or other pollutants used in vehicle or equipment operation and maintenance
- Soaps, solvents, or detergents
- Toxic or hazardous substances from a spill or other release
- Any other pollutant that could cause or tend to cause water pollution

Pollution prevention measures should be implemented for non-storm water components of the discharge.

ADDITIONAL EROSION CONTROL NOTES

A. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. AREAS OF THE DEVELOPMENT SITE THAT ARE NOT TO BE GRADED SHALL BE PROTECTED FROM CONSTRUCTION TRAFFIC OR OTHER DISTURBANCE UNTIL FINAL SEEDING IS PERFORMED.

B. PROPERTIES AND CHANNELS ADJOINING THE DEVELOPMENT SITE SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION.

C. SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.

D. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITH FOURTEEN (14) CALENDAR DAYS FOLLOWING THE END OF ACTIVE HYDROLOGIC DISTURBANCE.

E. ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.

F. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G., SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURES).

G. ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS SHALL BE PERMANENTLY STABILIZED.

H. A STABILIZED MAT OF AGGREGATE UNDERLAIN WITH FILTER CLOTH (OR OTHER APPROPRIATE MEASURES) SHALL BE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION-SITE OF A MAJOR DEVELOPMENT TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, OR PARKING AREA. ANY SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY, OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

I. SOIL STOCKPILES SHALL NOT BE LOCATED IN A FLOOD-PRONE AREA OR A DESIGNATED BUFFER PROTECTING WATERS OF THE UNITED STATES OR ISOLATED WATERS OF MCHENRY COUNTY.

J. THE CONTRACTOR SHALL PROVIDE ADEQUATE RECEPTACLES FOR THE DEPOSITION OF ALL CONSTRUCTION MATERIAL DEBRIS GENERATED DURING THE DEVELOPMENT PROCESS. THE CONTRACTOR SHALL NOT CAUSE OR PERMIT THE DUMPING, DEPOSITING, DROPPING, THROWING, DISCARDING, OR LEAVING OF CONSTRUCTION MATERIAL DEBRIS UPON OR INTO ANY DEVELOPMENT SITE, CHANNEL, WATERS OF THE U.S. OR ISOLATED WATERS OF MCHENRY COUNTY. THE CONTRACTOR SHALL MAINTAIN THE DEVELOPMENT SITE FREE OF CONSTRUCTION MATERIAL DEBRIS.

K. ALL TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN AN EFFECTIVE WORKING CONDITION.

NO.	DATE	REMARKS

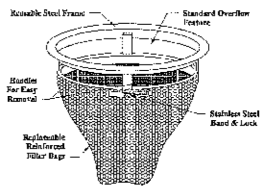
NO.	DATE	REMARKS
2	11/23/15	PER CRYSTAL LAKE HS
1	01/22/15	PER CITY

SOIL EROSION AND SEDIMENT CONTROL PLAN
CRYSTAL LAKE SOUTH HIGH SCHOOL
OUTDOOR BLEACHERS
CRYSTAL LAKE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
SPACECO INC.

FILENAME: 6934_10SE01
DATE: 12/19/14
JOB NO. 6934.10
SHEET C6
6 OF 9

Catch-All - is a manufactured inlet filtration device designed to significantly reduce the ingress of pollutants into stormwater systems, and therefore, improve water quality. Designs are available for a custom fit in virtually any drainage structure casting.

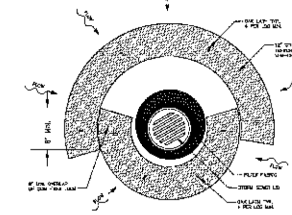


Catch-All HR is available to provide the added benefit of hydrocarbon removal.

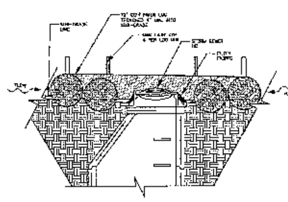
Design Benefits
1. Pollution Prevention
   - Sediment Control
2. Pollution Removal
   - Hydrocarbons (Catch-All HR)
   - Total Suspended Sediment
   - Phosphorus*
   - Nitrogen*
   - Heavy Metals*
   - *By virtue of sediment control*

Applications
1. Site Development & Highway Construction
   - Inlet Protection / Sediment Control
2. Permanent BMP
   - Maintenance Yards
   - Wash Bays
   - Parking Lots & Garages
   - Airports - Tarmac, Cab/Limo Stands, Rental Returns
   - Bank/Fast Food Drive-Ups
   - Reduce Maintenance of Underground Detention Systems
   - Reduce Maintenance of Underground Oil/Water Separators

PLAN CODE: (FF)

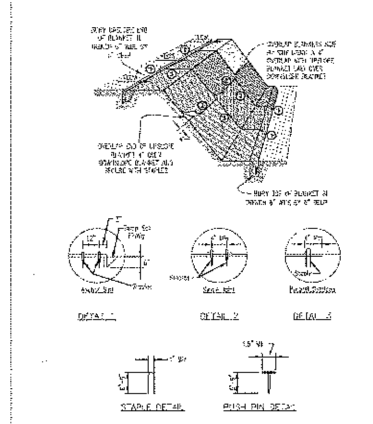


YARD GRATE INLET PROTECTION



YARD GRATE INLET PROTECTION

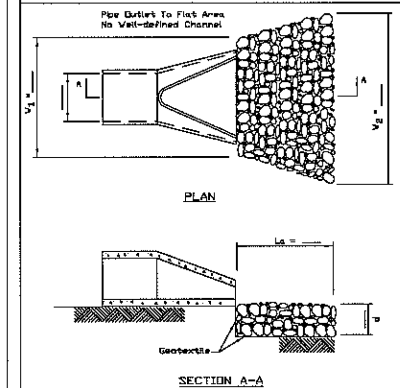
PLAN CODE: (FF)



PLAN CODE: (EB)

EROSION CONTROL BLANKET INSTALLATION DETAILS

PIPE OUTLET TO FLAT AREA

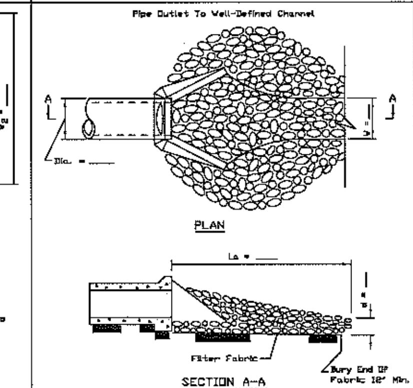


NOTES:
1. The filter fabric shall meet the requirements in material specifications 592 GEOTEXTILE Table 1 or 2, class I, II or III.
2. The rock riprap shall shall meet the IDOT requirements for the following gradation: RR ________, Quality ________.
3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

PLAN CODE: (LA)

NRCS — STANDARD DWG. NO. IL-610

PIPE OUTLET TO CHANNEL

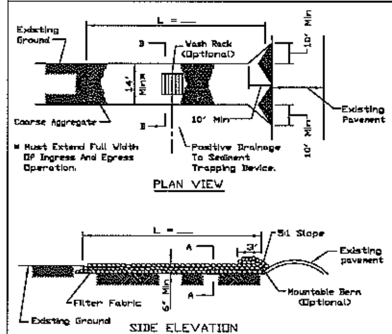


PLAN CODE: (LA)

NOTES:
1. The filter fabric shall meet the requirements in material specification 592 GEOTEXTILE Table 1 or 2, Class I, II or III.
2. The rock riprap shall meet the IDOT requirements for the following gradation ________.
3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

NRCS — STANDARD DWG. NO. IL-611

STABILIZED CONSTRUCTION ENTRANCE PLAN

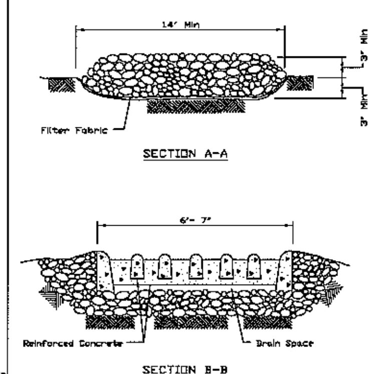


NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

PLAN CODE: (SE)

NRCS — STANDARD DWG. NO. IL-630

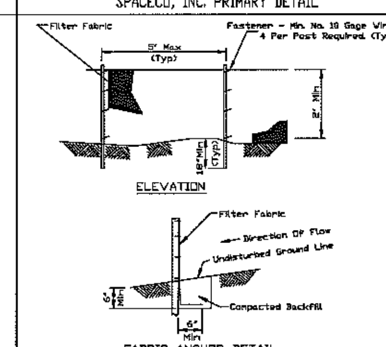
STABILIZED CONSTRUCTION ENTRANCE PLAN



PLAN CODE: (SE)

NRCS — STANDARD DWG. NO. IL-630

SILT FENCE PLAN
SPACECO, INC. PRIMARY DETAIL

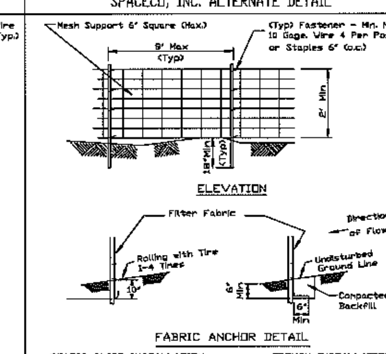


NOTES:
1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification as specified by AASHTO M288-00 requirements.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

PLAN CODE: ——xx——

STANDARD DWG. NO. IUM-620A

SILT FENCE WITH WIRE SUPPORT PLAN
SPACECO, INC. ALTERNATE DETAIL

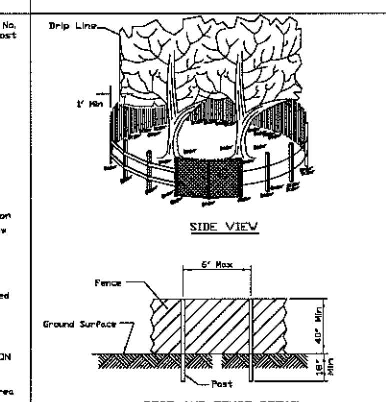


NOTES:
1. Silt Fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization. Silt fence shall be placed on the flattest area available.
2. Filter fabric shall meet the requirements of material specification as specified by AASHTO M288-00 requirements.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

PLAN CODE: ——xx——

STANDARD DWG. NO. IUM-620A(W)

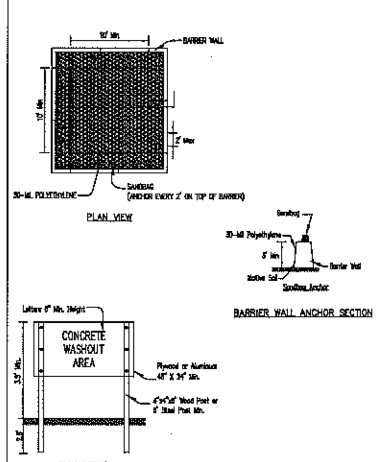
TREE PROTECTION - FENCING



PLAN CODE: ——TP——

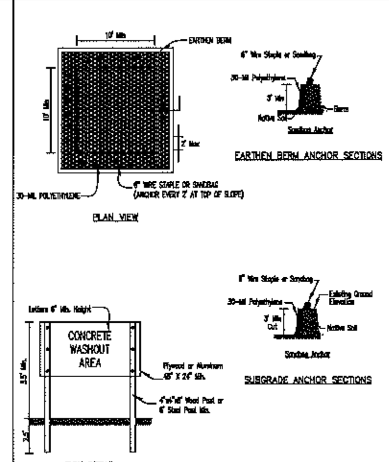
NOTES:
1. The fence shall be located a minimum of 1 foot outside the drip line of the tree to be saved and in no case closer than 5 feet to the trunk of any tree.
2. Fence posts shall be either standard steel posts or wood posts with a minimum cross sectional area of 3.0 sq. in.
3. The fence may be either 40" high snow fence, 40" plastic web fencing or any other material as approved by the engineer/inspector.

NRCS — STANDARD DWG. NO. IL-690



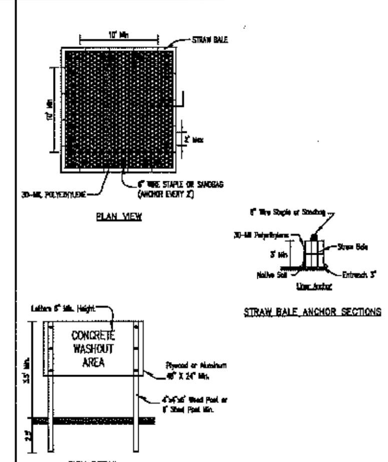
PLAN CODE: (CW)

TEMPORARY CONCRETE WASHOUT FACILITY – BARRIER WALL



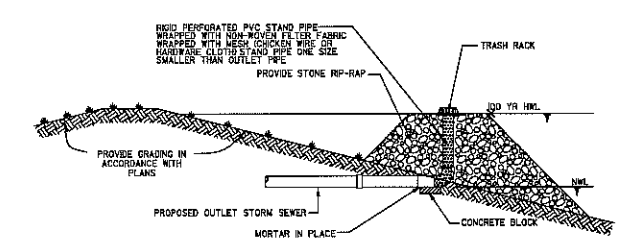
PLAN CODE: (CW)

TEMPORARY CONCRETE WASHOUT FACILITY – EARTHEN TYPE



PLAN CODE: (CW)

TEMPORARY CONCRETE WASHOUT FACILITY – STRAW BALE



PLAN CODE:

PERFORATED RISER DETAIL (PR)

NOT TO SCALE

1. THE PERFORATED RISER SHALL BE PROVIDED AS PART OF THE SEDIMENT AND EROSION CONTROL MEASURES DURING CONSTRUCTION AND IN CONJUCTION WITH THE CONSTRUCTION OF THE DETENTION BASIN.
2. WHEN THE DETENTION BASIN AND UPSTREAM TRIBUTARY DRAINAGE AREAS ARE REVEGETATED, AND WHEN DIRECTED BY THE ENGINEER, THE PERFORATED RISER SHALL BE REMOVED AND THE BASIN OUTFALL STRUCTURES SHALL BE CONSTRUCTED AND THE GRADING RESTORED IN ACCORDANCE WITH THE PLANS.

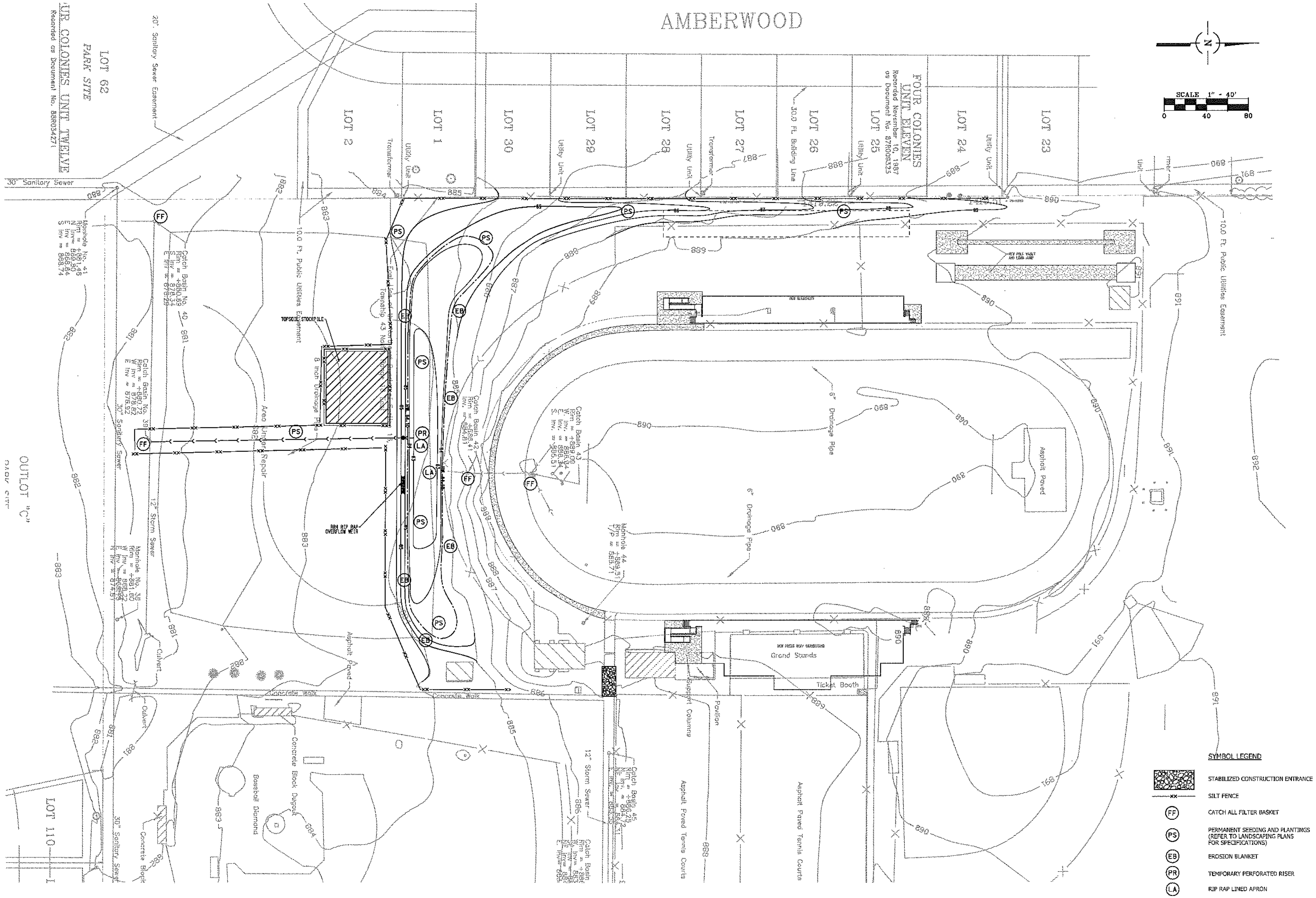
NO.	DATE	REMARKS
2	11/23/15	PER CRYSTAL LAKE HS
1	01/22/15	PER CITY

SOIL EROSION AND SEDIMENT CONTROL PLAN

CRYSTAL LAKE SOUTH HIGH SCHOOL OUTDOOR BLEACHERS
CRYSTAL LAKE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
SPACECO INC.

FILENAME: 6934_10SE02
DATE: 12/19/14
JOB NO. 6934.10


AMBERWOOD
SCALE 1" = 40'
0
40
80
N
FOUR COLONIES UNIT ELEVEN
Recorded November 10, 1987 as Document No. 87R08325
LOT 2
LOT 1
LOT 30
LOT 29
LOT 28
LOT 27
LOT 26
LOT 25
LOT 24
LOT 23
LOT 62
PARK SITE
FOUR COLONIES UNIT TWELVE
Recorded as Document No. 88R03427
20' Sanitary Sewer Easement
30" Sanitary Sewer
TOPSOIL STOCKPILE
10.0 Ft. Public Utilities Easement
RIP RAP OVERFLOW WEIR
Grand Stands
Ticket Booth
Pavilion
Asphalt Paved
Asphalt Paved Tennis Courts
Baseball Diamond
Concrete Walk
OUTLOT "C"
LOT 110
Culvert
12" Storm Sewer
6" Drainage Pipe

SYMBOL LEGEND

- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE
- (FF) CATCH ALL FILTER BASKET
- (PS) PERMANENT SEEDING AND PLANTINGS (REFER TO LANDSCAPING PLANS FOR SPECIFICATIONS)
- (EB) ERDSION BLANKET
- (PR) TEMPORARY PERFORATED RISER
- (LA) RIP RAP LINED APRON

NO.	DATE	REMARKS
2	11/23/15	PER CRYSTAL LAKE HS
1	01/22/15	PER CITY

SOIL EROSION AND SEDIMANT CONTROL PLAN

CRYSTAL LAKE SOUTH HIGH SCHOOL
OUTDOOR BLEACHERS
CRYSTAL LAKE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
SPACECO INC.

FILENAME: 6934.10ENG.DGN
DATE: 12/19/14
JOB NO. 6934.10
SHEET C8
8 OF 9

EARTHWORK NOTES

1. GENERAL

   A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE. THE CONTRACTOR SHALL OBTAIN AND READ THE GEOTECHNICAL REPORTS AVAILABLE FROM THE OWNER.

   B. ANY QUANTITIES IN THE BID PROPOSAL ARE INTENDED AS A GUIDE FOR THE CONTRACTOR'S USE IN DETERMINING THE SCOPE OF THE COMPLETED PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES AND APPRAISE HIMSELF OF ALL SITE CONDITIONS. THE CONTRACT PRICE SUBMITTED BY THE CONTRACTOR SHALL BE CONSIDERED AS LUMP SUM FOR THE COMPLETE PROJECT. NO CLAIMS FOR EXTRA WORK WILL BE RECOGNIZED UNLESS ORDERED IN WRITING BY THE OWNER.

   C. THE CONTRACTOR WILL NOTE THAT THE ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS ARE FINISHED GRADE ELEVATIONS AND THAT PAVEMENT THICKNESS, TOPSOIL, ETC. MUST BE SUBTRACTED TO DETERMINE SUBGRADE ELEVATIONS.

   D. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION, AND PREVENT STORMWATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS. THE FAILURE TO PROVIDE PROPER DRAINAGE WILL NEGATE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION AND TRAFFIC.

   E. PLANS FOR THE SITE DEWATERING, IF EMPLOYED, SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER PRIOR TO IMPLEMENTATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR DEWATERING DURING CONSTRUCTION.

   F. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE "SOIL EROSION AND SEDIMENTATION CONTROL MEASURES". THE INITIAL ESTABLISHMENT OF EROSION CONTROL PROCEDURES AND THE PLACEMENT OF SILT AND FILTER FENCING, ETC. TO PROTECT ADJACENT PROPERTY, WETLANDS, ETC. SHALL OCCUR BEFORE GRADING BEGINS. A MUNICIPAL EROSION CONTROL INSPECTION MAY BE REQUIRED BEFORE ANY EARTHWORK IS PERFORMED.

   G. PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, THE CONTRACTOR SHALL ERECT A "SNOW FENCE" AROUND ANY TREE DESIGNATED TO BE PRESERVED. SAID FENCE SHALL BE PLACED IN A CIRCLE CENTERED AROUND THE TREE, THE DIAMETER OF WHICH SHALL BE SUCH THAT THE ENTIRE DRIP ZONE (EXTENT OF FURTHEST EXTENDING BRANCHES) SHALL BE WITHIN THE FENCE LIMITS. THE EXISTING GRADE WITHIN THE FENCED AREA SHALL NOT BE DISTURBED.

   H. EXCESS MATERIALS, IF NOT UTILIZED AS FILL, SHALL BE COMPLETELY REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED OF OFF-SITE BY THE CONTRACTOR.

   I. ALL EARTHWORK SHALL BE DONE UNDER THE SUPERVISION OF AN ILLINOIS LICENSED ENGINEER WHO SPECIALIZES IN THE GEOTECHNICAL FIELD (SOILS ENGINEER). THIS ENGINEER WILL BE RESPONSIBLE FOR ENSURING THAT ALL UNSUITABLE MATERIALS ARE REMOVED, ALL STRUCTURAL FILL MATERIALS ARE PROPERLY PLACED AND COMPACTED, ALL PAVEMENT SUBGRADES ARE PROPERLY PREPARED, PROOF ROLLING SUBGRADES AND BASE COURSES, AND ENSURING THAT ALL WATER RETAINING EMBANKMENTS ARE PROPERLY CONSTRUCTED. THE DEVELOPER PAYS FOR ALL GEOTECHNICAL SERVICES.

2. TOPSOIL EXCAVATION INCLUDES:

   A. EXCAVATION OF TOPSOIL AND OTHER STRUCTURALLY UNSUITABLE MATERIALS WITHIN THOSE AREAS THAT WILL REQUIRE EARTH EXCAVATION OR COMPACTED EARTH FILL MATERIAL. EXISTING VEGETATION SHALL BE REMOVED PRIOR TO STRIPPING TOPSOIL OR FILLING AREAS.

   B. PLACEMENT OF THE EXCAVATED MATERIAL IN OWNER DESIGNATED AREAS FOR FUTURE USE WITHIN AREAS TO BE LANDSCAPED, AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL. PROVIDE NECESSARY EROSION CONTROL MEASURES FOR STOCKPILE.

   C. TOPSOIL STOCKPILED FOR RESPREAD SHALL BE FREE OF CLAY AND SHALL NOT CONTAIN ANY OF THE TRANSITIONAL MATERIAL BETWEEN THE TOPSOIL AND CLAY. THE TRANSITIONAL MATERIAL SHALL BE USED IN NON-STRUCTURAL FILL AREAS OR DISPOSED OF OFF-SITE.

   D. TOPSOIL RESPREAD SHALL INCLUDE HAULING AND SPREADING 6" OF TOPSOIL OVER AREAS TO BE LANDSCAPED WHERE SHOWN ON THE PLANS OR DIRECTED BY THE OWNER.

   E. MODERATE COMPACTION IS REQUIRED IN NON-STRUCTURAL FILL AREAS.

3. EARTH EXCAVATION INCLUDES:

   A. EXCAVATION OF CLAY AND OTHER MATERIALS WHICH ARE SUITABLE FOR USE AS STRUCTURAL FILL. THE EXCAVATION SHALL BE TO WITHIN A TOLERANCE OF 0.1 FEET OF THE PLAN SUBGRADE ELEVATIONS WHILE MAINTAINING PROPER DRAINAGE. THE TOLERANCE WITHIN PAVEMENT AREAS SHALL BE SUCH THAT THE EARTH MATERIALS SHALL "BALANCE" DURING THE FINE GRADING OPERATION.

   B. PLACEMENT OF THE CLAY AND OTHER SUITABLE MATERIALS SHALL BE WITHIN THOSE AREAS REQUIRING STRUCTURAL FILL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATIONS TO WITHIN A TOLERANCE OF 0.1 FEET. THE FILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS THAT SHALL NOT EXCEED EIGHT (8) INCHES IN THICKNESS, AND THE WATER CONTENT SHALL BE ADJUSTED IN ORDER TO ACHIEVE REQUIRED COMPACTION.

      STRUCTURAL FILL MATERIAL MAY BE PLACED WITHIN THOSE PORTIONS OF THE SITE NOT REQUIRING STRUCTURAL FILL, TO WITHIN SIX (6) INCHES OF THE PLAN FINISHED GRADE ELEVATION. IN AREAS REQUIRING STRUCTURAL FILL, HOWEVER, THIS MATERIAL SHALL NOT BE PLACED OVER TOPSOIL OR OTHER UNSUITABLE MATERIALS UNLESS SPECIFICALLY DIRECTED BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

   C. COMPACTION OF THE CLAY AND OTHER SUITABLE MATERIALS, SHALL BE TO AT LEAST 93% OF THE MODIFIED PROCTOR DRY DENSITY WITHIN PROPOSED PAVEMENT AREAS, SIDEWALK, ETC. COMPACTION SHALL BE AT LEAST 95% OF THE MODIFIED PROCTOR WITHIN PROPOSED BUILDING PAD AREAS.

   D. EXCAVATION: QUANTITIES OF EARTH EXCAVATION INDICATED ELSEWHERE IN THIS CONTRACT HAVE BEEN COMPUTED BY THE END AREA METHOD AS PROVIDED FOR IN SECTION 202 OF THE STANDARD SPECIFICATIONS. EXCAVATED MATERIALS NOT NEEDED FOR THIS JOB SITE SHALL BE LEGALLY DISPOSED OF. PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER CUBIC YARD OF EARTH EXCAVATION.

4. UNSUITABLE MATERIAL

   UNSUITABLE MATERIAL SHALL BE CONSIDERED AS MATERIAL WHICH IS NOT SUITABLE FOR THE SUPPORT OF PAVEMENT AND BUILDING CONSTRUCTION, AND IS ENCOUNTERED BELOW NORMAL TOPSOIL DEPTHS AND THE PROPOSED SUBGRADE ELEVATION. THE DECISION TO REMOVE SAID MATERIAL, AND TO WHAT EXTENT, SHALL BE MADE BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

5. MISCELLANEOUS THE CONTRACTOR SHALL:

   A. SPREAD AND COMPACT UNIFORMLY TO THE DEGREE SPECIFIED ALL EXCESS TRENCH SPOIL AFTER COMPLETION OF THE UNDERGROUND IMPROVEMENTS.

   B. SCARIFY, DISC, AERATE, AND COMPACT, TO THE DEGREE SPECIFIED, THE UPPER TWELVE (12) INCHES OF THE SUITABLE SUBGRADE MATERIAL, IN ALL AREAS THAT MAY BE SOFT DUE TO EXCESS MOISTURE CONTENT. THIS APPLIES TO CUT AREAS AS WELL AS FILL AREAS.

   C. PROVIDE WATER TO ADD TO DRY MATERIAL IN ORDER TO ADJUST THE MOISTURE CONTENT FOR THE PURPOSE OF ACHIEVING THE SPECIFIED COMPACTION.

   D. BACKFILL THE CURB AND GUTTER AFTER ITS CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE MATERIAL. THE CURBS SHALL NOT BE BACKFILLED UNTIL THE CONCRETE HAS CURED FOR AT LEAST 7 DAYS.

   E. TRENCH COMPACTION: ALL TRENCHES SHALL BE COMPACTED BY MECHANICAL TECHNIQUES APPROVED BY THE SOILS ENGINEER UNTIL PROPER COMPACTION IS ACHIEVED. THE REQUIREMENT FOR MECHANICAL COMPACTION MAY BE WAIVED IF, IN THE OPINION OF THE SOILS ENGINEER AND THE MUNICIPAL ENGINEER, THE BACKFILLED TRENCHES MEET THE DENSITY REQUIREMENTS. JETTING OF TRENCHES FOR COMPACTION WILL NOT BE ALLOWED.

6. TESTING AND FINAL ACCEPTANCE

   A. THE CONTRACTOR SHALL PROVIDE AS A MINIMUM, A FULLY LOADED SIX-WHEEL TANDEM AXLE TRUCK FOR PROOF ROLLING THE PAVEMENT SUBGRADE PRIOR TO THE PLACEMENT OF THE CURB AND GUTTER AND THE BASE MATERIAL. THIS SHALL BE WITNESSED BY MUNICIPAL ENGINEER AND THE OWNER. SEE PAVING SPECIFICATION.

   B. ANY UNSUITABLE AREA ENCOUNTERED AS A RESULT OF PROOF ROLLING SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL, OR OTHERWISE CORRECTED, APPROVED BY THE SOILS CONSULTANT.

   C. ANY TESTING THAT IS REQUIRED OF THIS CONSTRUCTION IS CONSIDERED INCIDENTAL TO THE COST OF CONSTRUCTION. NO SEPARATE PAYMENT WILL BE MADE.

STORM SEWER NOTES

2. BEDDING:

   A. ALL STORM SEWERS SHALL BE INSTALLED ON A TYPE A GRANULAR BEDDING, 1/4" TO 3/4" IN SIZE (CA-13) WITH A MINIMUM THICKNESS EQUAL TO 1/4 THE OUTSIDE DIAMETER OF THE SEWER PIPE BUT NOT LESS THAN 4". BLOCKING OF ANY KIND FOR GRADE IS NOT PERMITTED. THE BEDDING MATERIALS SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY. BEDDING SHALL EXTEND TO THE SPRINGLINE ON ALL RCP AND DIP PIPE. BEDDING SHALL EXTEND TO 12" OVER ANY PVC OR HDPE PIPE. COST OF BEDDING SHALL BE CONSIDERED INCIDENTAL TO THE COST OF PIPE. NO SEPERATE PAYMENT SHALL BE MADE FOR THIS.

3. STRUCTURES:

   A. MANHOLE, CATCH BASIN AND INLET BOTTOMS SHALL BE PRECAST CONCRETE SECTIONAL UNITS OR MONOLITHIC CONCRETE. MANHOLES AND CATCH BASINS SHALL BE A MINIMUM 4' IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS. STRUCTURE JOINTS SHALL BE SEALED WITH O-RING OR BUTYL ROPE. A MAXIMUM OF EIGHT (8") INCHES OF ADJUSTING RINGS SHALL BE USED.

   B. A CONCRETE BENCH TO DIRECT FLOWS SHALL BE CONSTRUCTED IN THE BOTTOM OF ALL INLETS AND MANHOLES.

   C. THE FRAME, GRATE, AND/OR CLOSED LID SHALL BE CAST IRON OF THE STYLE SHOWN ON THE PLANS.

   D. MANHOLE LIDS SHALL BE MACHINE SURFACED, NON-ROCKING DESIGN. THE CLOSED LIDS SHALL HAVE THE WORD "STORM" CAST ON THE LID. THE JOINTS BETWEEN CONCRETE SECTION ADJUSTING RINGS, AND FRAME SHALL BE SEALED WITH A MASTIC COMPOUND.

4. FRENCH DRAIN:

   A. ALL LOW POINT STORM STRUCTURES ARE TO HAVE FOUR 1" DIAMETER WEEP HOLES PROVIDED 24" BELOW THE TOP OF LID. THE HOLES SHALL BE COVERED WITH A GEOTEXTILE FILTER FABRIC CEMENTED IN PLACE WITH BITUMINOUS MASTIC. THE DRAIN SHALL BE BACKFILLED WITH BEDDING OR CA-7 CRUSHED STONE TO TOP OF SUBGRADE OR BOTTOM OF TOPSOIL.

5. CASTINGS:

   A. CASTINGS FOR SEWER OR OTHER STRUCTURES SHALL BE "NEENAH" OR APPROVED EQUAL. COST OF CASTINGS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE STRUCTURE. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.

6. CLEANING:

   A. THE STORM SEWER SYSTEM SHALL BE THOROUGHLY CLEANED PRIOR TO FINAL INSPECTION AND TESTING.

7. TELEVISING:

   A. THE STORM SEWER SYSTEM SHALL BE TELEVISED IF REQUIRED BY MUNICIPALITY.

STORM SEWER NOTES

1. GENERAL:

   A. ALL STORM SEWER PIPE SHALL BE RCP, UNLESS OTHERWISE NOTED ON THE PLANS, IN ACCORDANCE WITH THE FOLLOWING:

      PLAN CODE: MATERIAL
      RCP: REINFORCED CONCRETE PIPE (ASTM C-76) WITH O-RING GASKETED JOINTS, (ASTM C-443): TYPE 1, CLASS IV, PER SSRBC SECTION 603. ELLIPTICAL RCP PIPE SHALL BE TYPE 1, HE-III PER SSRBC SECTION 511. PRECAST FLARED END SECTIONS MAY HAVE MASTIC JOINTS. PAYMENTS SHALL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT OF STORM SEWER COMPLETE IN PLACE.

      DIP: DUCTILE IRON WATERMAIN QUALITY PIPE CLASS 52 (ANSI 21.51) WITH MECHANICAL OR PUSH-ON JOINTS (ANSI 21.11). CEMENT LINING IS NOT REQUIRED.

      PVC: POLYVINYL CHLORIDE SEWER PIPE, SDR 26, CONFORMING TO ASTM D-3034 WITH ASTM D-3212 PUSH-ON GASKETED JOINTS.

      HDPE: HIGH DENSITY POLYETHYLENE CORRUGATED PIPE WITH SMOOTH INTERIOR MEETING AASHTO M-294 SUCH AS ADS N-12 BY ADVANCED DRAINAGE SYSTEM, COLUMBUS, OHIO OR HI-Q BY HANCOR, FINDLEY, OH. JOINTS SHALL BE SPLIT CORRUGATED BANDS BY THE PIPE MANUFACTURER.

      UD: RIGID, PERFORATED PVC UNDERDRAIN PIPE (ASTM D-2729), SDR 35, OR SCHEDULE 40, WITH SOLVENT WELD JOINTS AND FILTER FABRIC WRAPPING OR SOCK. PERFORATED HDPE PIPE ALSO ACCEPTABLE.

   B. "BAND SEAL" OR SIMILAR COUPLINGS SHALL BE USED WHEN JOINING SEWER PIPES OF DISSIMILAR MATERIALS. "BAND SEAL", "FERNCO", AND "MISSION" TYPE COUPLINGS SHALL NOT BE USED ON SEWER MAINS. CHANGES IN PIPE MATERIAL SHALL BE MADE AT A STRUCTURE.

   C. ALL STORM SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE.

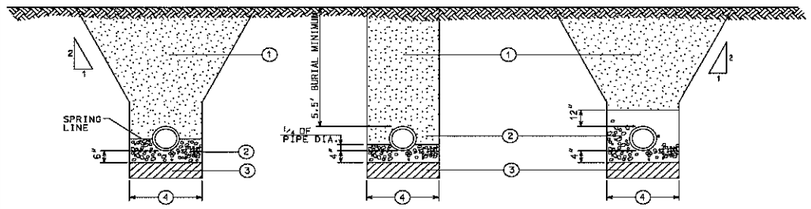
   D. ALL FOOTING DRAIN AND SUMP PUMP DISCHARGE PIPES SHALL BE CONNECTED TO THE STORM SEWER SYSTEM. DOWNSPOUTS SHALL DISCHARGE TO THE GROUND.

   E. THE CONTRACTOR SHALL MAINTAIN AT LEAST THREE (3') FEET OF COVER OVER THE TOP OF SHALLOW PIPES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL MOUND OVER ANY PIPES WHICH HAVE LESS THAN THREE (3') FEET OF COVER DURING CONSTRUCTION UNTIL THE AREA IS FINAL GRADED OR PAVED.

1. GRANULAR TRENCH BACKFILL WITHIN TWO (2) FEET OF EXISTING OR PROPOSED PAVEMENT, CURB & GUTTER, AND SIDEWALK, MACHINE BACKFILL OF EXCAVATED MATERIAL IN OTHER LOCATIONS.
2. GRANULAR BEDDING MATERIAL SHALL CONFORM TO ASTM D 2321 CLASS I FOR SANITARY SEWER AND IDOT CA-6, CRUSHED STONE 3/4" TO 1/4" IN SIZE (NO.67 ASTM D-448) FOR STORM AND WATERMAIN TAMPED INTO PLACE AS SHOWN. (ONLY TO 1/4 POINT OF PIPE IF DUCTILE IRON PIPE IS USED).
3. UNSUITABLE MATERIAL TO BE REMOVED AND REPLACED (WHERE DIRECTED) WITH GRANULAR MATERIAL AND PAID FOR SEPARATELY.
4. PIPE DIAMETER 8" AND LESS ----TRENCH WIDTH = 18"
   PIPE DIAMETER 8" AND LARGER---TRENCH WIDTH = (1.5 X PIPE DIA.) + 8"

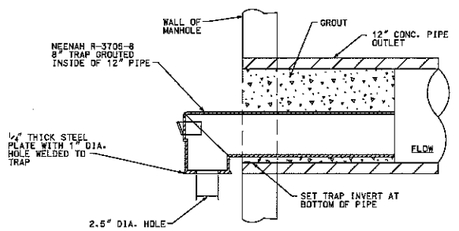
NOTES:

1. THE COST OF ALL GRANULAR BEDDING (ITEM 2) TO BE MERGED WITH THE PIPE.
2. THE COST OF ALL GRANULAR TRENCH BACKFILL (ITEM 1) TO BE PAID PER LINEAR FOOT OTHERWISE NOTED IN SPECIAL PROVISIONS.



TYPICAL TRENCH CROSS-SECTIONS
NOT TO SCALE

CAD-DTLS/SPDTLS/C005.DTL



RESTRICTOR/TRAP DETAIL
NOT TO SCALE

NO.	DATE	REMARKS
2	11/23/15	PER CRYSTAL LAKE HS
1	01/22/15	PER CITY

SPECIFICATIONS AND DETAILS

CRYSTAL LAKE SOUTH HIGH SCHOOL
OUTDOOR BLEACHERS
CRYSTAL LAKE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4660 Fax: (847) 696-4665

SPACECO INC.

FILENAME: 8934.10SPEC

DATE: 12/19/14

JOB NO. 8934.10

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9 OF 9

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