Agenda Item Summary

PLAN COMMISSION

EDENBRIDGE PARKING LOT
18134 S. 66th Court

February 19, 2015

Applicant
Edenbridge, LLC
c/o Ed Schulz, A & R Katz

Property Location
18134 S. 66th Court

Parcel Size
North lot: 1.59 ac
South lot: .26 ac
Total: 1.85 ac

General Zoning
R-6 PD
(*Medium Density Residential District, Edenbridge Planned Unit Development)*

Approval Sought
Site Plan Approval

Requested Action
Grant Site Plan Approval to the Applicant contingent on resolving any open items with Staff.

Project Planner
Paula J. Wallrich, AICP
Deputy Planning Director

PROJECT DESCRIPTION

Edenbridge Apartments, located at 181st Street and 66th Court, is an independent retirement community providing various rental housing options. The Applicant is seeking site plan approval for parking improvements that will increase the total number of parking spaces on the property. The property has developed over time with the first structure constructed in 1973. There are three different sections of housing on the property, including: **Fulton Commons** (178 one-bedroom and 8 studio residential units), **Garden Apartments** (90 one and two-bedroom residential units) and **Townhomes** (32 two and three-bedroom residential units). Over time the age demographics for Fulton Commons has changed. When it was first built, the housing programs limited Fulton Commons to renters 65 years of age and older. Currently advertisements for Fulton Commons restrict tenants to "50 years and better".

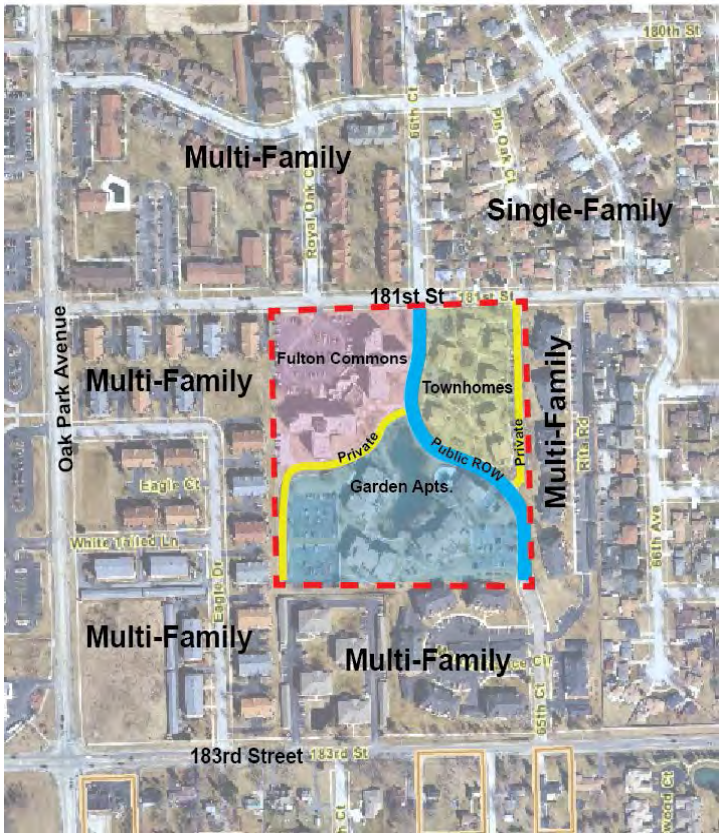
With the change in age demographics the need for parking has increased. The property owners have requested the construction of additional parking on their property to better serve their tenants and assist Edenbridge in remaining competitive with other senior facilities in the area. Edenbridge was approved as an R-6 PD (Edenbridge Planned Unit Development); however, the proposed changes reflect a minor PUD change and therefore do not require a public hearing. The Planning Director has recommended that the Plan Commission review the parking lot improvements due to the impact on stormwater flow, traffic circulation, and landscape screening of the parking lots.

LIST OF SUBMITTED PLANS

Submitted Sheet Name		Prepared By	Date On Sheet
C-0	Cover Sheet	WMA	02/18/15
C-1.1	Existing Conditions	WMA	02/18/15
C-1.2	Demolition Plan	WMA	02/18/15
C-2	Paving & Layout Plan	WMA	02/18/15
C-3	Grading & Utility Plan	WMA	02/18/18
C-4.1	Erosion Control Plan	WMA	02/18/15
C-4.2	SWPPP Narrative	WMA	02/18/15
C-4.3	SWPPP Forms & Notes	WMA	02/18/15
C-5	Details	WMA	02/18/15
C-6.1	Flood Plain Cross Sections – 1	WMA	02/18/15
C-6.2	Flood Plain Cross Sections – 2	WMA	02/18/15
L-1	Landscape Plan	WMA	02/18/15
L-2	Landscape Details	WMA	02/18/15
	Photometric Version A	RAB Lighting	02/17/15

WMA = Webster, McGrath & Ahlberg, Ltd.

EXISTING SITE

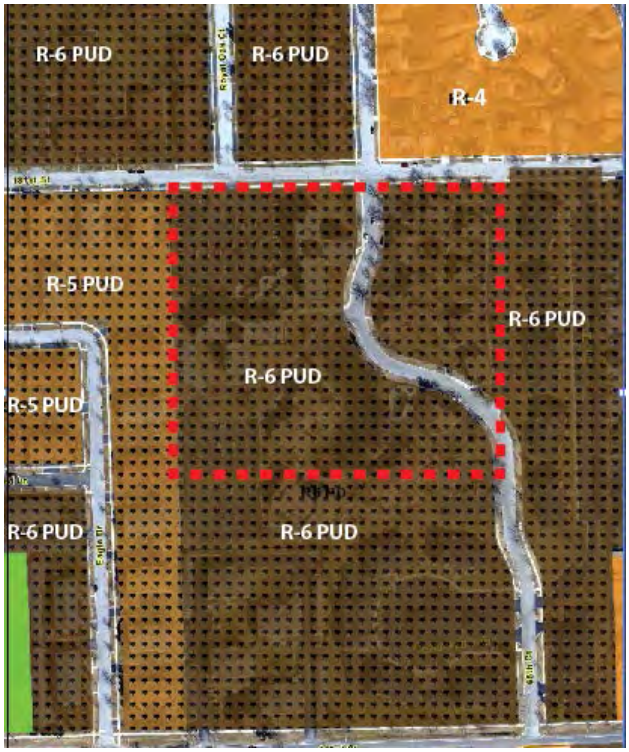


Edenbridge is comprised of approximately 15 acres (13 acres net of right-of-way) with a total of 309 residential units in various types of housing structures. The property was developed prior to the establishment of the regulatory floodplain that now exists in this area. The property is subject to a MWRD permit that predates the current detention standards and is also subject to the grandfathering provisions of the current Watershed Management Ordinance. The proposed improvements include the construction of 83 new parking spaces and approximately 0.5 acres of new impervious surface.

When the project was first developed, over 99% of the site was designed above the base flood elevation. However, with the establishment of flood elevations, the existing parking lot for Fulton Commons and surrounding roadways are below the new flood elevation and consequently are located in the floodplain. In addition, the Village Engineer and Public Works Director have noted street flooding and some overbank flooding for areas to the north of the subject property.

With the increase of impervious surfaces and the need for compensatory storage, the Applicant has agreed to expand the footprint of the existing detention pond. Additional landscaped islands in the Fulton Commons parking lot and the use of Grasscrete™ for the connection between the north and south parking lots will increase pervious surfaces and help to offset the need for additional compensatory storage.

The subject property is zoned R-6 PD, Medium Density Residential District and is within the Edenbridge Planned Unit Development. The existing parking was approved as part of the original and amended Planned Unit Development and reflects the residential and senior housing market at that time.



The proposed improvements represent a minor PUD change and therefore do not require a public hearing process. However, due to the changes in the site plan and the potential impact on adjacent property, Staff is requesting a Site Plan Review and Approval by the Plan Commission.

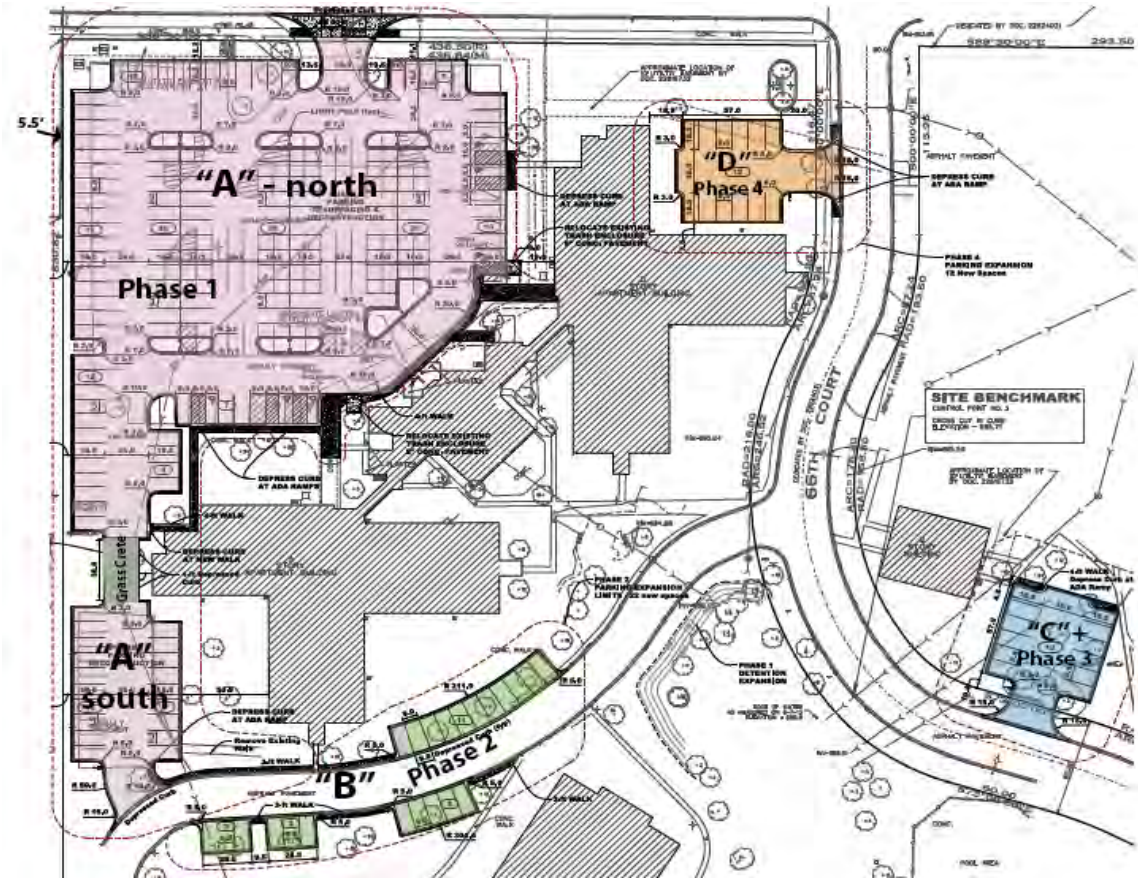
The surrounding land use is predominately multi-family with the exception of the property to the northeast across 181st street which is a single-family neighborhood. A public street (66th Court) bisects the Edenbridge property; there are also two private streets servicing the residential units.

SITE PLAN REVIEW

The Applicant proposes to increase the number of parking spaces throughout the development in four phases (see Phasing Diagram on the next page) as outlined in the table on the next page. No time frame has been submitted for the various phases. Improvements will be made to the storm detention pond and additional landscaping will be provided to screen the new parking areas. New lighting has been proposed in the Fulton Commons parking lot and in the new parking areas ("B", 'C", and "D").

<u>Open Item #1:</u> ***The Applicant must identify a timeline for phasing the parking lot improvements.***

PHASING DIAGRAM



PROPOSED PARKING IMPROVEMENTS

	Parking Lot	Existing # Spaces		Proposed # Spaces		Net Gain		Total Gain
		Standard	Accessible	Standard	Accessible	Standard	Accessible	
PHASE 1	Fulton Commons "A"	116	5	152	6	36	1	**37**
PHASE 2	Private Drive "B"	0 (Fire Lane)	0 (Fire Lane)	22	0	22	0	**22**
PHASE 3	Townhome "C"	0	0	12	0	12	0	**12**
PHASE 4	Fulton Commons (Northeast) "D"	0	0	12	0	12	0	**12**
	TOTAL	**121**		**204**		**83**		**83**

The first phase involves the reconfiguration of the existing Fulton Commons parking lot ("A"- north) which serves the two five-story buildings (187 units). The redesign of the parking lot provides better circulation within the lot and yields an additional 28 parking spaces. The southern lot ("A"- south) will also be expanded to include an additional nine (9) parking spaces for a total of 37 additional spaces in Lot "A". Per the recommendation of the Fire Department, the two parking lots will be connected with a Grasscrete™ paving system (see photo on left). This provides permeability for stormwater and is strong enough to support emergency fire equipment that may need access through the parking lots. The Village has approved this type of paving surface in previous developments (Panduit and Bickford Senior Living). This connection is intended for use by emergency vehicles only and will be marked as such.

The existing parking lot for Fulton Commons has a 17'setback from its west property line. The proposed parking lot has a 5.5' setback from the west property line; parking lots may be located in a required side yard but may not be located closer than 5' to a lot line in a side yard. The proposed parking lot meets setback requirements.

PARKING SUPPLY & DEMAND

With the change in age demographics for Fulton Commons, the Applicant has expressed a need for increased parking. Per the lease provisions for Edenbridge tenants, there is currently a shortage of 111 parking spaces. The table below outlines existing parking configurations of the various housing areas and the parking needs per lease agreements. For comparison purposes, Village parking requirements have also been provided. Per the Zoning Ordinance parking ratios, there is currently a shortage of 266 spaces for tenant uses. As the table indicates, there is a shortage of parking for the entire property and especially for the Fulton Common buildings. The proposed improvements will begin to address the parking needs for the property and assist the owner in remaining competitive in the senior housing marketplace.

PARKING SUPPLY, DEMAND, and REQUIREMENTS

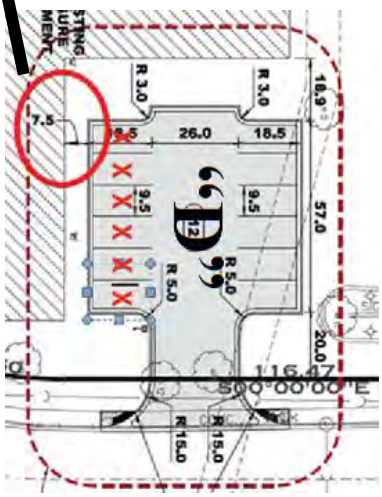
Parking Lot	# of Parking Stalls		# of DU	# of Parking Stalls Allotted per Lease	# of Parking Stalls Required per ZO	Shortage Before Improvements		Shortage After Improvements	
	Existing	New Spaces Proposed				Per Lease	Per ZO	Per Lease	Per ZO
Fulton Commons (A, B, & D)	121	71	187	187	281	66	160	(+5)	89
Garden Apartments	139	0	90	180	225	41	86	41	86
Townhomes "C"	60	12	32	64	80	4	20	(+8)	8
Total	**320**	**403**	**309**	**431**	**586**	**111**	**266**	**28**	**183**

DU=Dwelling Units
ZO = Zoning Ordinance

After the construction of an additional 83 parking spaces, the supply ratio will be in better proportion with parking demand and the lease agreements for Edenbridge tenants. This is especially true for the senior facility at Fulton Commons which will reduce its parking shortage from 66 spaces to a surplus of 5 spaces per lease agreements; overall shortages for Edenbridge will be reduced by 75%.

The off-street parking proposed along the private drive (Area "B") also addresses a life safety concern expressed by the Fire Department. A fire lane was established along this private drive in 1982; however, the Fire Department has had chronic issues with enforcement in this area. Cars are frequently parked along both sides of the private drive making it difficult to not only traverse the road, but it is often impassable by emergency or fire equipment. The addition of the twenty-two spaces in this area will alleviate this problem and improve the life safety conditions of the adjacent residents. New signage will be erected along this private drive identifying it as a "Fire Lane" with strict enforcement consistent with the approved Fire Lane Agreement.

The Applicant has also proposed additional parking at the northeast corner of the north Fulton Common building (Area "D"). This parking lot provides an additional twelve (12) parking spaces. Staff has expressed concern regarding the proximity of this parking lot to the north and east facades of the building (see photo and red circle within the diagram to the right). The parking lot is located only 7.5' from the outdoor living areas of the first floor residents.



The Applicant has stated that residents have expressed a strong desire for parking in close proximity to their dwelling units; however, Staff is concerned about headlight glare, quality of life, and use of the outdoor living space. With the curb located 7.5' from the building façade, the bumper overhang can encroach an additional 2-2.5', which could result in a small 5-5.5' separation between a car bumper and outdoor patios. Staff has recommended that the Applicant remove the south six (6) parking spaces in this area or relocate the lot further away from the building and seeks the Plan Commission's concurrence on this item.

<u>Open Item #2:</u> Proximity of parking area "D" to outdoor living areas in the north Fulton Commons building.

ACCESSIBLE PARKING

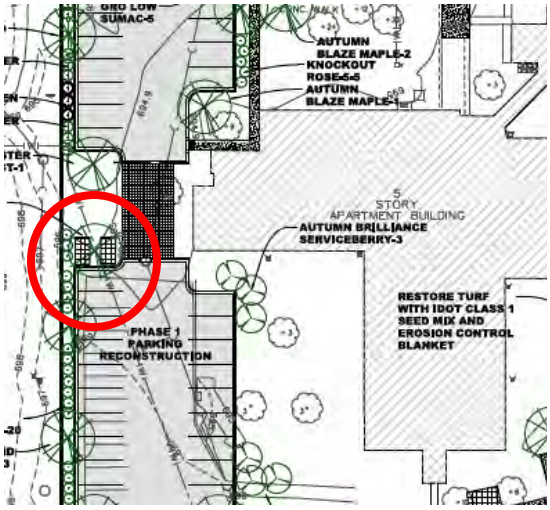
With the proposed parking reconfigurations there will be a total of 204 new parking spaces. Per the Illinois Accessibility Code there must be seven (7) accessible parking spaces provided in close proximity to accessible entrances. The proposed plan identifies six (6) spaces, therefore one (1) additional accessible parking space must be provided.

<u>Open Item #3:</u> Insufficient accessible parking spaces.

SNOW REMOVAL PLAN

In light of the limited parking for this property, Staff requested a snow removal plan to ensure there were adequate (non-parking) areas for the piling of snow. The cross hatch pattern on the Landscape Plan indicates areas for snow storage. There are some designations that are too close to plant material and are a concern for their impact on the plant's survivability. Staff will work with the Applicant to identify alternate locations and seeks concurrence from the Plan Commission that this is a concern.

<u>Open Item #4:</u> Location of snow storage areas.



LANDSCAPE

The site has mature landscaping that has provided some screening of the existing parking lots; however, there are no landscape islands currently in the parking lot for Fulton Commons "A". With the proposed improvements, eight (8) landscape islands will be added to the reconfigured parking lot. This will help to mitigate the expanse of asphalt in this area and provide shade to the parking lot.

181st Street Frontage

Currently there is minimal landscaping along the 181st Street frontage or the west property line. With the proposed improvements to Edenbridge, additional landscaping will be planted along 181st Street and the west property line which will include a significant amount of evergreen material. This will help to screen the parking lot and headlight glare of those using the Fulton Commons parking lot. The additional landscaping along 181st Street will soften the streetscape in this area and enhance the entryway into the senior facility. Evergreen material has been added to provide year round screening. Landscaping has also been proposed for areas "B", "C", and "D" that will be phased in with the associated parking lot improvements.

Looking west from the Fulton Commons parking lot

If parking lot "D" remains in the proposed configuration, Staff recommends additional screening to buffer the parking lot from the adjacent residential units and most especially the outdoor living areas. A solid low masonry wall or evergreen material could be specified as a screen.

<u>Open item #5:</u> Screening of parking lot "D".

PHOTOMETRICS AND LIGHTING

The architect has provided a Photometric Plan identifying the new locations of parking lot lighting and the resulting photometrics. With the reconfiguration of the parking lot the existing light standard locations were no longer appropriate. Currently there are six (6) lights in the "A" north parking lot; two (2) additional lights will be added.

The Village Zoning Ordinance requires a photometric reading of 0.5 foot candles or less at the property lines. The property is in conformance with this requirement with the exception of the west property line where the 0.5 foot candle contour varies a distance of 3-5' west of the property line. This will have a minimal impact along the adjacent detention pond; however, at the northwest corner of the parking lot ("A"), the 0.5 contour crosses the asphalt driveway of the adjacent property owner in a small area. With the addition of evergreen plantings in this area the light shed may be mitigated. Staff has consulted with the Lighting Consultant regarding this issue and they are investigating opportunities to remedy.

<u>Open Item #6:</u> Photometrics are exceeding ordinance limits at west property line.

ENGINEERING

As stated above, the parking lot for Fulton Commons now falls within a floodplain. The engineer has reviewed the Applicant's plan and approved them subject to the following:

- The additional detention storage will be provided thru the expansion of the existing detention pond.
- The outlet for the pond must be identified and inspected to verify that it is functioning appropriately. The downstream pipe shall be cleaned and televised as needed to assure proper functioning.
- The parking lot will be reconfigured to have a maximum 1 foot depth below the Base Flood Elevation. A cash-in-lieu fee for the offsite compensatory storage in the amount of $7,608 will be required.
- A revised MWRD permit will be required.

<u>Open Item #7</u>: Outstanding engineering items and payment of cash-in-lieu fee.

FIRE DEPARTMENT

The Fire Department has reviewed the proposed improvements and has requested a turning radius analysis be conducted for the entire parking lot for fire department vehicle accessibility. The Fire Department also supported the use of Grasscrete™ (pictured on Page 5) between the north and south Fulton Commons parking lots. They have also stated that the Fire Lane in area "B" will remain.

<u>Open Item #8</u>: A turning radius analysis for Fire Department equipment is required.

SUMMARY OF OPEN ITEMS

#	*Open Items*	*Suggested Resolutions*
1	*The Applicant must identify a timeline for phasing the parking lot improvements.*	*Receive a timeline for phasing of the parking improvements from the Applicant.*
2	*Proximity of parking area "D" to outdoor living areas in the north Fulton Commons building.*	*Direct Staff to work with the Applicant to either remove the six (6) southern parking spaces or relocate the parking lot.*
3	*Insufficient accessible parking spaces.*	*Add one accessible space to Fulton Commons "A" – north.*
4	*Location of snow storage areas.*	*Direct Staff to work with Landscape Architect to identify more appropriate locations.*
5	*Screening of parking lot "D".*	*Direct Staff on preferred location of parking lot and screening.*
6	*Photometrics are exceeding ordinance limits at west property line.*	*Direct Staff to work through issue with lighting consultant.*
7	*Outstanding engineering items and payment of cash-in-lieu fee. (See Page 8)*	*Final engineering approval by the Village Engineer and payment of fee.*
8	*A turning radius analysis for Fire Department equipment is required.*	*Direct Staff to review turning radius analysis before building permit issuance.*

STAFF RECOMMENDATION

If the Plan Commission wishes to take action on the agenda item, the following motion is in the proper format:

"… motion to grant Site Plan Approval, contingent upon resolution of open items to the satisfaction of Village Staff, to Edenbridge, LLC, for a minor deviation to the existing Edenbridge Planned Unit Development that includes the construction of a parking lot expansion (consistent with plans dated 02/18/2015) and related site improvements including engineering, landscaping, and lighting."

… with the following conditions:

1. *[Any condition, as specified by the Plan Commission…]*

###

Final Engineering Plans
for:

Edenbridge Apartments Parking Expansion

18134 S. 66th Court, Tinley Park, IL 60477

SE¼ Section 31, Township 36E, Range 13N - Cook County

P.I.N. 28-31-401-008

GENERAL NOTES

1. Unless otherwise noted in the special project specifications, the Project shall be built in accordance with the "Standard Specifications for Road and Bridge Construction for Illinois" latest edition, and "Supplemental Specifications and Recurring Special Provisions" latest edition by the Illinois Department of Transportation.

2. Sewer and Water Main Construction shall be in accordance with the Standard Specifications for Sewer and Water Main Construction in Illinois, latest edition.

3. Any reference to "supervision" by the Engineer in the Illinois Department of Transportation, Standard Specifications for Road and Bridge Construction or any other referenced documents shall be changed to "observation".

4. The Engineer shall not advise on, issue directions regarding or assume control over safety precautions and programs in connection with the work. The Engineer shall not have authority over or responsibility for safety precautions and programs incident to the work of Contractor(s) or any failure of Contractor(s) to comply with laws, rules, regulations, ordinances, codes or orders applicable to Contractor(s) furnishing and performing the work.

5. The Contractor shall be responsible for the general supervision of the work and assume sole responsibility for the job site conditions during the course of construction including the safety of all persons and property. This requirement shall apply continuously and shall not be limited to normal working hours.

6. It shall be the Contractor's responsibility to provide necessary signs, barricades, fences, etc. as required to insure the safety of vehicles and the general public during all phases of construction.

7. Contractors shall use appropriate equipment to expedite completion of the Project while avoiding any encroachment of neighboring property with any materials, equipment or excavation.

8. Overflow drainage routes and swales must be installed when shown.

9. Surface drainage shall be maintained during all phases of construction.

10. Erosion control practices shall be constructed in accordance with standard specifications for soil erosion and sediment control as contained in IEPA/WCP/87-012 or current issue.

11. All areas disturbed by construction shall be restored to their original condition at no additional cost to the Owner.

12. It shall be the Contractor's responsibility to properly dispose of any excess excavation material due either to channel construction or sewer installation and shall be considered as an incidental expense.

13. Elevations shown are U.S.G.S. datum.

14. Return radii are as shown.

15. Disposal of debris from clearing and tree removal shall be the Contractor's responsibility and considered as an incidental expense.

16. Natural plant covering and trees shall be retained and protected during construction where practical.

17. Topsoil replacement for landscaping is six [6] inches.

18. Final seeding and finishing shall be done as soon as possible in accordance with Section 250, Illinois Department of Transportation Standard Specifications.

19. All existing sewers and water mains shall be protected during construction by the Contractor. Any damages shall be repaired at the Contractor's expense.

20. The Contractor shall utilize a laser for all sewer main construction, except those locations waived by the Engineer.

21. All trenches under or within the zone of influence (1:1 slope) of existing or proposed pavement or sidewalks shall be backfilled with selected granular backfill.

22. All trenches shall be water jetted or mechanically compacted to the satisfaction of the Engineer.

23. The Contractor shall notify the Village of Tinley Park and all Utility Companies two [2] working days before construction is started in any work area.

24. Any field tile encountered during the course of construction must be reconnected or connected to the storm sewer system. Notify the Village of Tinley Park field inspector if any field tile is found.

25. The Contractor shall be responsible for locating all utilities [Northern Illinois Gas, Ameritech, and Commonwealth Edison Company]. Call J.U.L.I.E. 1-800-892-0123 prior to construction for location of utilities. All utilities damaged and/or disturbed by the Contractor shall be repaired at no additional cost to the Owner. Locations as shown on the plans are approximate and are based on the best available information.

CONTRACTOR'S INSURANCE:

1. Prior to the commencement of the work, the Owner shall require the Contractor and any Subcontractors to submit evidence to the Owner, Municipality and Engineer the he (they) have obtained for the period of the Construction Contract and the guarantee period comprehensive general liability insurance coverage (including completed operations coverage) and comprehensive automobile liability (including non-ownership and hired car coverage, as well as all owned vehicles). This coverage shall provide for bodily injury and property damage arising directly or indirectly out of, or in connection with, the performance of the work under the Construction Contract, and have a limit of not less than $500,000.00 for all damages arising out of bodily injury, sickness or death of one person and an aggregate of $5,000,000.00 for damages arising out of bodily injury, sickness or death of two or more persons in any one occurrence. The property damage portion will provide for a limit of not less than $1,000,000.00 for all damages arising out of injury to or destruction of property of others arising directly or indirectly out of or in connection with the performance of the work under the Construction Contract and in any one occurrence including explosion, collapse and underground exposures.

2. In addition, the Contractor shall carry the necessary public liability and workers' compensation insurance to protect the Village of Tinley Park, the Village Engineer, Owner, and the Engineer/Resident Project Representative and their consultants from any claims which may arise during construction and to submit two (2) acceptable certificates of insurance naming the Village of Tinley Park, the Village Engineer, the Engineer/Resident Project Representative and their consultants as additional insured.

3. In the event of accidents of any kind, the Contractor shall furnish the Village with copies of all reports of such accidents at the same time that the reports are forwarded to any other interested parties.

4. The Village Attorney shall review and approve the insurance contract to the satisfaction of the Village of Tinley Park.

INDEMNIFICATION:

1. To the fullest extent permitted by laws and regulations, the Contractor shall indemnify and hold harmless the Owner, the Village and the Engineer and their consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by law and regulations regardless of the negligence of any such party.

2. In any and all claims against the Owner, the Village or Engineer or any of their consultants, agents or employees by any employee of the Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work or obligation under not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

3. The obligations of the Contractor shall not extend to the liability of the Engineer, the Engineer's consultants, agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications.

4. To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Engineer, and the Engineer's consultants and their respective agents and employees (indemnitites) from and against any and all claims, damages, losses, economic losses and expenses, including but not limited to attorneys' fees, arising out of or specifically claims arising under the Illinois Structural Work Act), provided that such claim, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, excluding any proportionate amount of any claim, damage, loss or expense which is caused by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or reduce other rights or obligations of indemnity, which would otherwise exist as to a party or person described in the paragraph.

5. In claims against any person or entity indemnified under this paragraph by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they be liable, the indemnification obligation under the paragraph shall not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

SAFETY AND PROTECTION:

A. CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work:

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of underground facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damages, injury, or loss to any property referred to in paragraph A.2 of A.2 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the work, or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or ENGINEER's Consultant, or any one employed by any of them, or anyone for whose acts any of them may be liable and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them). CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed.

Sheet Index:

C-0 ..... Cover Sheet
C-1.1 ..... Existing Conditions
C-1.2 ..... Demolition Plan

C-2 ..... Paving & Layout Plan
C-3 ..... Grading & Utility Plan

C-4.1 ..... Erosion Control Plan
C-4.2 ..... SWPPP Narrative
C-4.3 ..... SWPPP Forms & Notes

C-5 ..... Details
C-6.1 ..... Flood Plain Cross Sections - 1
C-6.2 ..... Flood Plain Cross Sections - 2

L-1 .....Landscape Plan
L-2 .....Landscape Details

Vicinity Map
USGS Tinley Park Quad
1" = 2000'

Call Before You Dig
JULIE ILLINOIS ONE-CALL SYSTEM
Simply Call 811

IEPA GENERAL NOTES

Sanitary sewer construction, as a minimum, must comply with the following requirements:

1. Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, shall govern all sanitary sewer construction on this project except as modified by the Special Provisions.

2. Horizontal and or vertical separation between sanitary sewer or sanitary services and water main or water services shall be as described in Section 370.350 of the Illinois Recommended Standards for Sewage Works or Section 41-2.01 of the Standard Specifications for Water and Sewer main Construction in Illinois, latest edition.

3. Protection of water works structures including basins, wells and other treatment units shall be as described in Section 370.350 of the Illinois Recommended Standards for Sewage Works.

4. All flexible gravity thermoplastic sanitary sewer pipe shall be installed in accordance with ASTM 2321-89. Embedment material for bedding, haunching and initial backfill shall extend from at least 4 inches below the pipe to at least 6 inches above the pipe and shall be Class IA, IB, II or III. Processed materials produced for highway construction should be classified in accordance with ASTM 2321-89, Section 5 and Table 1 according to particle size, shape and gradation.

5. Sanitary sewer bedding for rigid pipe sanitary sewers shall be class A, B or C in accordance with ASTM C 12-95.

6. All sanitary sewers shall be tested for either infiltration, exfiltration or exfiltration of air under pressure, and for deflection of flexible thermoplastic pipe as described in Section 31-1.11 of the Standard Specifications for Water and Sewer Main construction in Illinois, latest edition.

7. Precast manhole inlet and outlet connections fitted with "O" rings or equally watertight connection shall be provided.

8. All manholes shall be inspected and leakage tested for water tightness in accordance with ASTM C 969.94 or ASTM C 1244-93, prior to being placed into service.

9. Pick holes in sanitary sewer manhole covers shall not be larger than 1 inch in diameter or shall be of the concealed type.

10 Watertight manhole covers shall be used whenever the manhole tops are buried or may be flooded by surface runoff or high water.

11 A drop pipe shall be provided for a sanitary sewer entering a manhole where its invert is 24 inches or greater above the manhole invert.

TYPICAL GENERAL NOTES

1. The MWRD Local Sewer Systems Section Field Office must be notified at least two (2) working days prior to the commencement of any work (CALL 708-588-4055).

2. Elevation datum is USGS

3. All floor drains shall discharge to the sanitary sewer system.

4. All downspouts and footing drains shall discharge to the storm sewer system.

5. All sanitary sewer pipe materials and joints (and storm sewer pipe materials and joints in a combined sewer area) shall conform to:

PIPE MATERIAL: SPEC.	JOINT SPEC.
Vitrified Clay Pipe	
VCP C-700	C-425
VCP (No-Bell) C-700	
Joints	C-425
Collar	D-1784
Concrete Pipe C-14	C-443
RCP C-76	C-443
ACP C-428	D-1869
ABS Sewer Pipe	
Solid Wall 8" Dia. SDR 23.5	
ABS D-2751	D-2751
ABS Composite/Truss Pipe	
8"-15" Dia.	
ABS D-2680	D-2680
PVC Gravity Sewer Pipe	
8"-15" Dia. SDR 26	
D-3034	D-3212 or D-2855
18"-27" Dia. F/dy=46	
F-679	D-3212 or D-2855
CISP A-74	C-564
DIP A-21.51	A-21.11

(Note: The District has approved less common pipe materials on a qualified basis in addition to those above. Please contact the District if considering using pipe not listed above.)

6. All sanitary sewer construction (and storm sewer construction in combined sewer areas), requires stone bedding with stone 1/4" to 1" in size, with minimum bedding thickness equal to 1/4 the outside diameter of the sewer pipe, but not less than four (4) inches nor more than eight (8) inches. Material shall be CA-11 or CA-13 and shall be extended at least 12" above the top of the pipe when using PVC.

7. "Band Seal" or similar flexible-type couplings shall be used in the connection of sewer pipes of dissimilar materials.

8. When connecting to an existing sewer main by means other that an existing wye, tee, or and existing manhole, one of the following methods shall be used:
   1. Circular saw-cut of sewer main by proper tools ("Shewer-Tap" machine or similar) and proper installation of hub-wye saddle or hub-tee saddle.
   2. Remove an entire section of pipe (breaking only the top of one bell) and replace with a wye or tee branch section.
   3. With pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting, using "Band Seal" or similar couplings to hold it firmly in place.

9. Whenever a sanitary/combined sewer crosses under a watermain, the minimum vertical distance from the top of the sewer to the bottom of the watermain shall be 18 inches. Furthermore, a minimum horizontal distance of 10 feet between sanitary/combined sewers and watermains shall be maintained unless: the sewer is laid in a separate trench, keeping a minimum 18" vertical separation; or the sewer is laid in the same trench with the watermain located at the opposite side on a bench of undisturbed earth, keeping a minimum 18" vertical separation. If either the vertical or horizontal distances described above can not be maintained, or the sewer crosses above the watermain, the sewer shall be constructed to watermain standards.

10. All existing septic systems shall be abandoned. Abandoned tanks shall be filled with granular material or removed.

11. All sanitary manholes, (and storm manholes in combined sewer areas), shall have a minimum inside diameter of 48 inches, and shall be cast in place or precast reinforced concrete.

Legend

	EXISTING SANITARY MANHOLE		EXISTING LIGHT POLE
	PROPOSED SANITARY MANHOLE		PROPOSED LIGHT POLE
	SANITARY CLEANOUT		OVERHEAD LIGHT POLE
	EXISTING STORM MANHOLE		RAILROAD SIGNAL POLE
	PROPOSED STORM MANHOLE		RAILROAD SIGNAL VAULT
	EXISTING STORM CATCH BASIN		UTILITY POLE
	PROPOSED STORM CATCH BASIN	OH	OVERHEAD WIRES
	EXISTING STORM INLET	E	UNDERGROUND ELECTRIC
	PROPOSED STORM INLET	G	UNDERGROUND GAS
	FLARED END SECTION	T	UNDERGROUND TELEPHONE
	DOWNSPOUT	C T	UNDERGROUND CABLE T.V.
	TRANSFORMER	W	WATER MAIN
	ELECTRIC MANHOLE	W	PROPOSED WATER MAIN
	ELECTRICAL BOX		SANITARY SEWER
	CABLE T.V. BOX		PROPOSED SANITARY SEWER
	TELEPHONE BOX		STORM SEWER
	TELEPHONE MANHOLE		PROPOSED STORM SEWER
	ELECTRIC METER		EXISTING COMBINED SEWER
	GAS METER	X X	FENCE LINE
	GAS VALVE		GUARD RAIL
	B-BOX		DECIDUOUS TREE
	WATER VALVE		PINE TREE
	EXISTING WATER VALVE VAULT		OVERFLOW ARROW
	PROPOSED WATER VALVE VLT		DROVE IRON PIPE
	EXISTING FIRE HYDRANT		FOUND IRON PIPE
	PROPOSED FIRE HYDRANT	R	RECORD DIMENSION
	POST INDICATOR VALVE	M	MEASURED DIMENSION
	SIGN	FE	FLOOR ELEVATION
	FLAG POLE	TW	TOP OF WALL
	MAILBOX	TC	TOP OF CURB
	TRAFFIC SIGNAL POLE	FL	CURB FLOW LINE
	TRAFFIC SIGNAL VAULT		

SOURCE BENCHMARK:

VILLAGE OF TINLEY PARK TPK28
FLANGE BOLT ON FIRE HYDRANT AT NORTHWEST CORNER OF 181st AND RIDGELAND AVE.
ELEVATION = 695.57

SOURCE BENCHMARK PROVIDED BY ROBINSON ENGINEERING AND CHECKED AGAINST VILLAGE OF TINLEY PARK TPK286

SITE BENCHMARK:

CONTROL NO. 3
CROSS CUT IN TOP OF CURB ON SOUTHWEST SIDE OF 66th COURT, BY DETENTION POND, ~120-ft SOUTH OF INTERNAL DRIVE ALONG NORTH OF POND.

ELEVATION = 695.71

LICENSED PROFESSIONAL ENGINEER
STEPHEN M. RICHARDS
062-054556
STATE OF ILLINOIS

STATE OF ILLINOIS)
COUNTY OF DUPAGE)SS

THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION AND ARE BASED UPON AVAILABLE INFORMATION.

2/18/2015

STEPHEN MARK RICHARDS — DATE
LICENSE EXPIRES 11/30/15

0 30 60
GRAPHIC SCALE - FEET

Edenbridge Apartments Parking Expansion

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

Webster, McGrath & Ahlberg, Ltd.
WMA
Land Surveying · Civil Engineering · Landscape Architecture
Over 100 Years of Service to Clients
207 South Naperville Road, Wheaton, Illinois 60187
Phone (630) 653-2822 Fax (630) 653-2827
Design Firm License No. 184-003101

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-13-2014	Additional Topographic Information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show snow storage locations	SMR

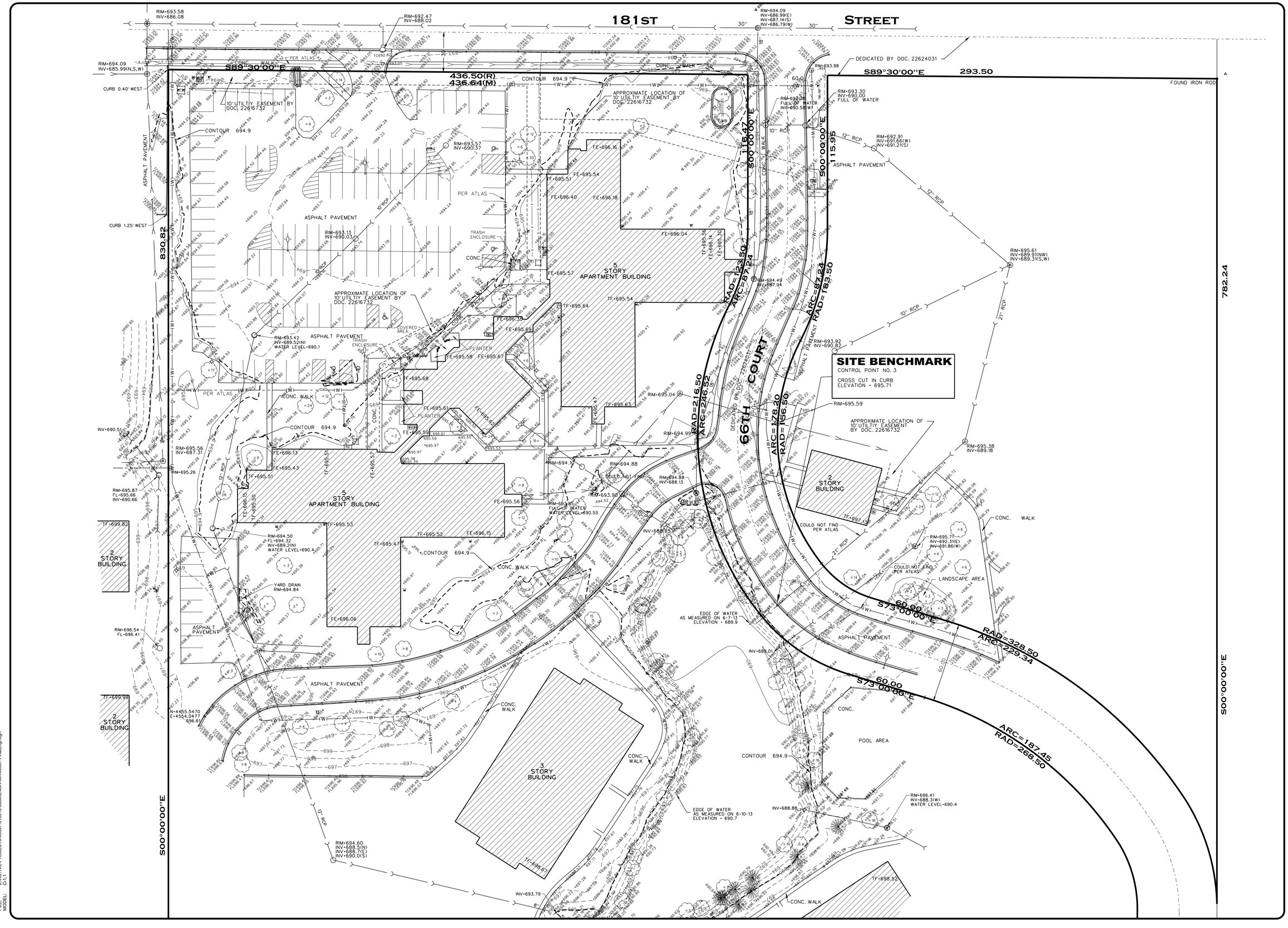
Section-Township-Range
Cook: SE¼ 31-36-13

JOB #	43307	SURV:	JCV
DRAWN:	RLS	REVIEW:	SMR
SCALE:	1"=30'	DATE:	05-12-2014

SHEET NAME
Cover Sheet

SHEET #
C-0

DATE: 2/18/2015
FILE: E:\ACTIVE-PROJECTS\43307-131813-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: C-0



0 30 60
GRAPHIC SCALE - FEET

EDENBRIDGE APARTMENTS PARKING EXPANSION

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

WEBSTER, MCGRATH & AHLBERG, LTD.
LAND SURVEYING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE
Over 100 Years of Service to Clients
207 SOUTH NORTHWEST HIGHWAY, WHEATON, ILLINOIS 60187
PHONE: (630) 668-7197 FAX: (630) 668-7508
DESIGN FIRM LICENSE NO. 184003101

REV'N	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-12-2014	Additional Topographic Information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show snow storage locations	SMR

Section-Township-Range
Cook: SE¼ 31-36-13

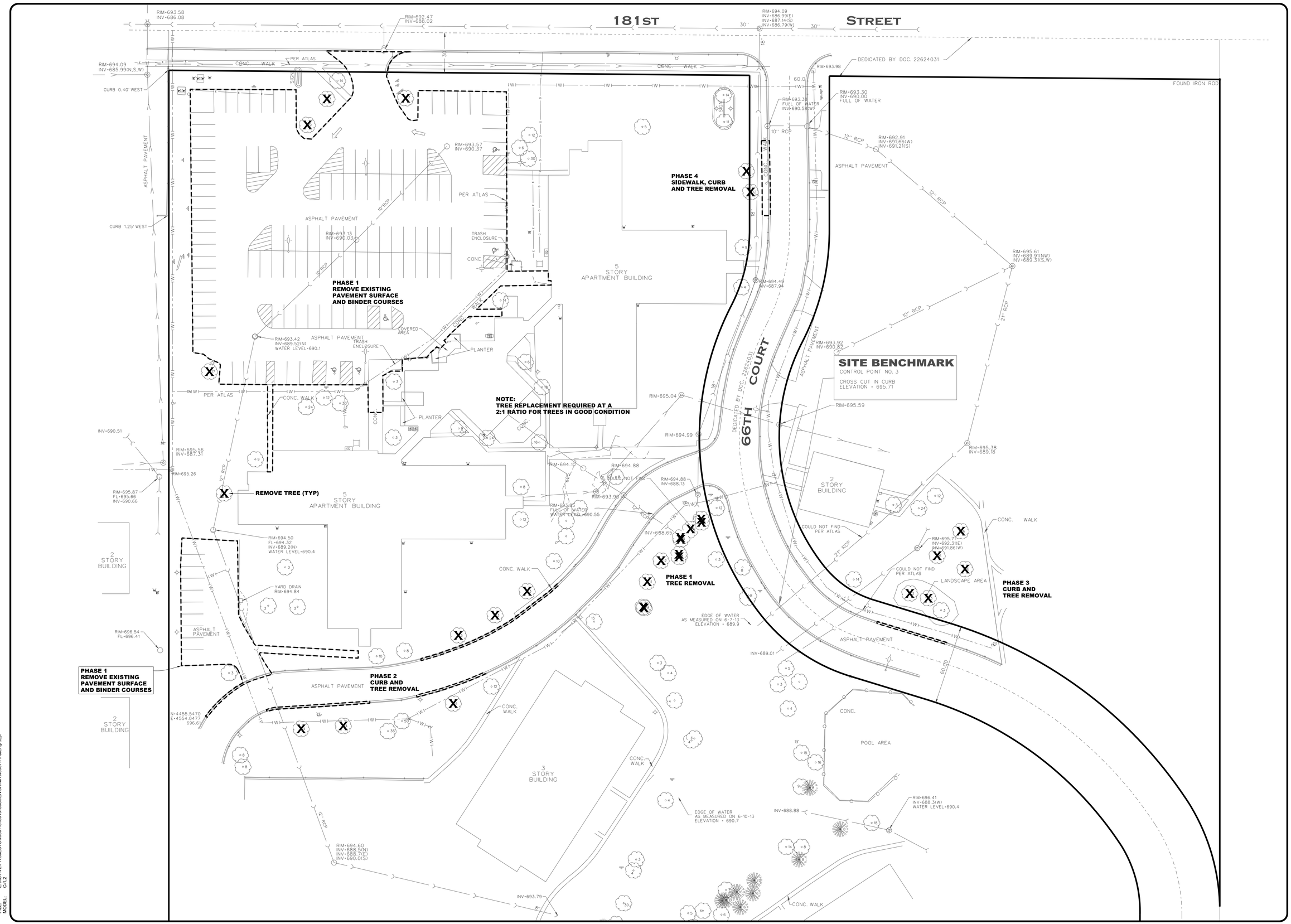
JOB # 43307	SURV: JCV
DRAWN: RLS	REVIEW: SMR
SCALE: 1"=30'	DATE: 05-12-2014

SHEET NAME

EXISTING CONDITIONS

SHEET # C-1.1

DATE: 2/18/2015
FILE: E:\ACTIVE-PROJECTS\43307-313613-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: C-1.1



Edenbridge Apartments Parking Expansion

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

Webster, McGrath & Ahlberg, Ltd.
Land Surveying - Civil Engineering - Landscape Architecture
Over 100 Years of Service to Clients
207 South Northwoods Road, Wheaton, Illinois 60187
Phone (630) 653-2500 Fax (630) 653-2503
Design Firm License No. 184-003101

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-15-2014	Additional Topographic Information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show snow storage locations	SMR

Section-Township-Range
Cook: SE¼ 31-36-13

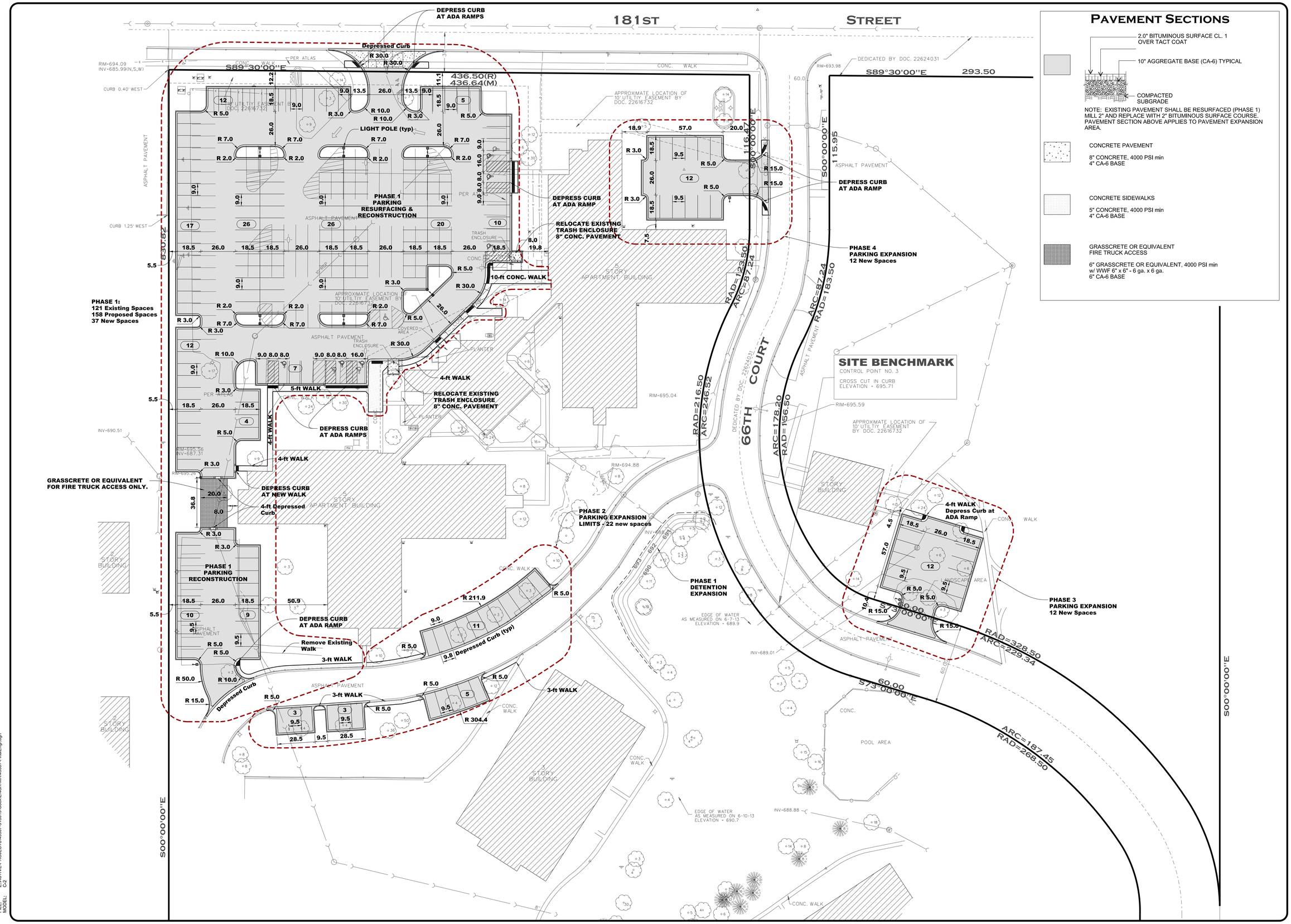
JOB # 43307	SURV: JCV
DRAWN: RLS	REVIEW: SMR
SCALE: 1"=30'	DATE: 05-12-2014

SHEET NAME

Demolition Plan

SHEET # C-1.2

DATE: 2/18/2015
FILE: E:\ACTIVE-PROJECTS\43307-313613-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: C-1.2



Pavement Sections

2.0" BITUMINOUS SURFACE CL. 1 OVER TACT COAT

10" AGGREGATE BASE (CA-6) TYPICAL

COMPACTED SUBGRADE

NOTE: EXISTING PAVEMENT SHALL BE RESURFACED (PHASE 1) MILL 2" AND REPLACE WITH 2" BITUMINOUS SURFACE COURSE. PAVEMENT SECTION ABOVE APPLIES TO PAVEMENT EXPANSION AREA.

CONCRETE PAVEMENT

8" CONCRETE, 4000 PSI min
4" CA-6 BASE

CONCRETE SIDEWALKS

5" CONCRETE, 4000 PSI min
4" CA-6 BASE

GRASSCRETE OR EQUIVALENT FIRE TRUCK ACCESS

6" GRASSCRETE OR EQUIVALENT, 4000 PSI min w/ WWF 6" x 6" - 6 ga. x 6 ga.
6" CA-6 BASE

0 30 60
GRAPHIC SCALE - FEET

Edenbridge Apartments Parking Expansion

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

Webster, McGrath & Ahlberg, Ltd.
WMA
Land Surveying - Civil Engineering - Landscape Architecture
Over 100 Years of Service to Clients
207 South Naperville Road, Wheaton, Illinois 60187
Ph: (630)668-7603 Fax: (630)682-1760
Design Firm License No. 184003101

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-13-2014	Additional Topographic Information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show snow storage locations	SMR

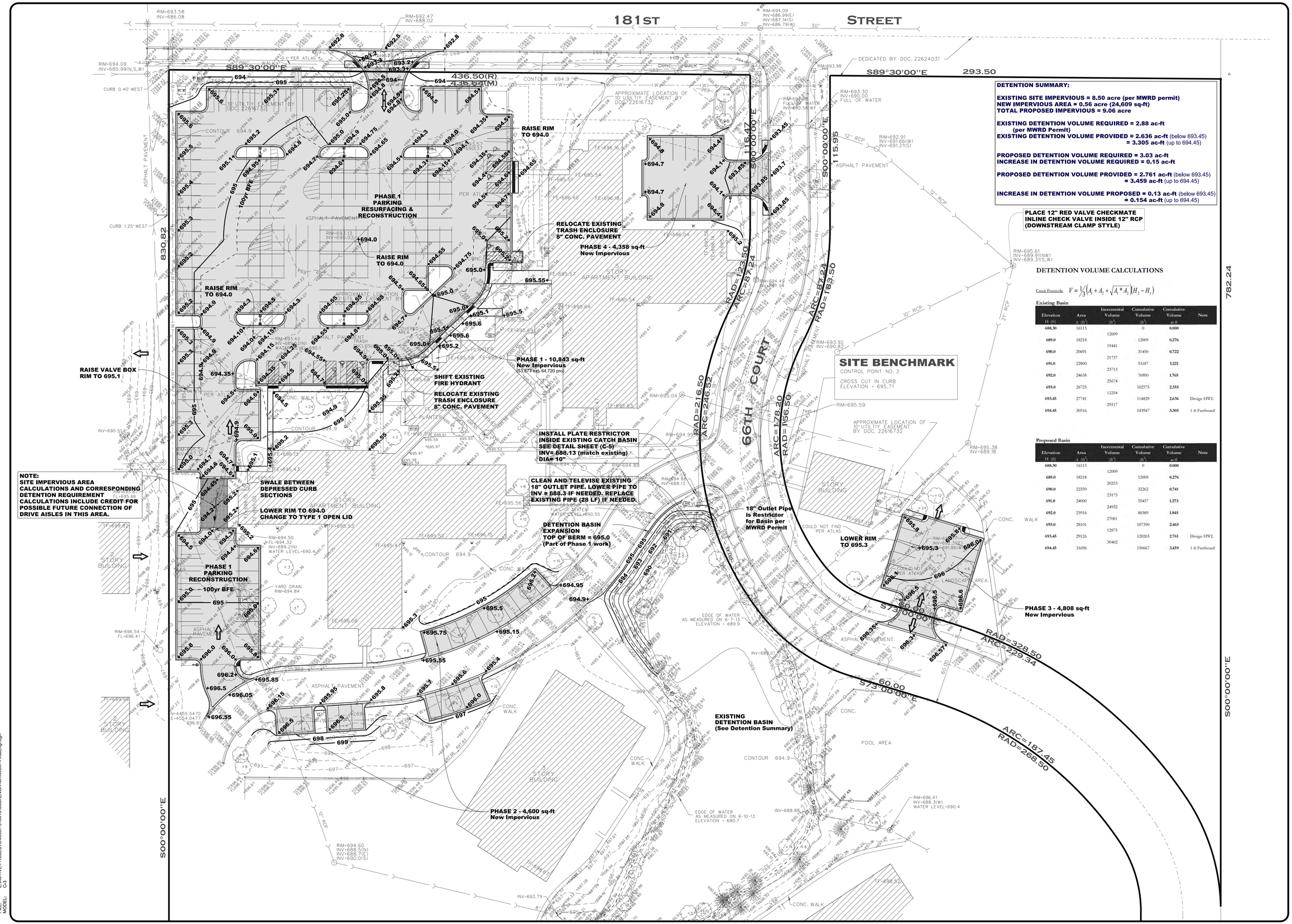
Section-Township-Range
Cook: SE¼ 31-36-13

JOB # 43307	SURV: JCV
DRAWN: RLS	REVIEW: SMR
SCALE: 1"=30'	DATE: 05-12-2014

SHEET NAME
Paving & Layout Plan

SHEET # C-2

DATE: 2/18/2015
FILE: E:\ACTIVE-PROJECTS\43307-31361 3-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: C-2



DETENTION SUMMARY:

EXISTING SITE IMPERVIOUS = 8.50 acre (per MWRD permit)
NEW IMPERVIOUS AREA = 0.56 acre (24,609 sq-ft)
TOTAL PROPOSED IMPERVIOUS = 9.06 acre

EXISTING DETENTION VOLUME REQUIRED = 2.88 ac-ft (per MWRD Permit)
EXISTING DETENTION VOLUME PROVIDED = 2.636 ac-ft (below 693.45) **= 3.305 ac-ft** (up to 694.45)

PROPOSED DETENTION VOLUME REQUIRED = 3.03 ac-ft
INCREASE IN DETENTION VOLUME REQUIRED = 0.15 ac-ft

PROPOSED DETENTION VOLUME PROVIDED = 2.761 ac-ft (below 693.45) **= 3.459 ac-ft** (up to 694.45)

INCREASE IN DETENTION VOLUME PROPOSED = 0.13 ac-ft (below 693.45) **= 0.154 ac-ft** (up to 694.45)

DETENTION VOLUME CALCULATIONS

Conic Formula: $V = \frac{1}{3}\left(A_1 + A_2 + \sqrt{A_1 * A_2}\right)(H_2 - H_1)$

Existing Basin

Elevation H (ft)	Area A (ft²)	Incremental Volume (ft³)	Cumulative Volume (ft³)	Cumulative Volume ac-ft	Note
688.30	16115		0	**0.000**	
		12009			
689.0	18218		12009	**0.276**	
		19441			
690.0	20691		31450	**0.722**	
		21737			
691.0	22800		53187	**1.221**	
		23713			
692.0	24638		76900	**1.765**	
		25674			
693.0	26725		102575	**2.355**	
		12254			
693.45	27741		114829	**2.636**	Design HWL
		29117			
694.45	30516		143947	**3.305**	1-ft Freeboard

Proposed Basin

Elevation H (ft)	Area A (ft²)	Incremental Volume (ft³)	Cumulative Volume (ft³)	Cumulative Volume ac-ft	Note
688.30	16115		0	**0.000**	
		12009			
689.0	18218		12009	**0.276**	
		20253			
690.0	22359		32262	**0.741**	
		23175			
691.0	24000		55437	**1.273**	
		24952			
692.0	25916		80389	**1.845**	
		27001			
693.0	28101		107390	**2.465**	
		12875			
693.45	29126		120265	**2.761**	Design HWL
		30402			
694.45	31696		150667	**3.459**	1-ft Freeboard

EDENBRIDGE APARTMENTS PARKING EXPANSION

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

WEBSTER, MCGRATH & AHLBERG, LTD.
LAND SURVEYING · CIVIL ENGINEERING · LANDSCAPE ARCHITECTURE
Over 100 Years of Service to Clients
207 SOUTH MINERVA AVENUE, WHEATON, ILLINOIS 60187
PHONE (630) 653-2600 FAX (630) 653-2650
DESIGN FIRM LICENSE NO. 184003101

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-13-2014	Additional Topographic Information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show storage locations	SMR

Section-Township-Range
Cook: SE¼ 31-36-13

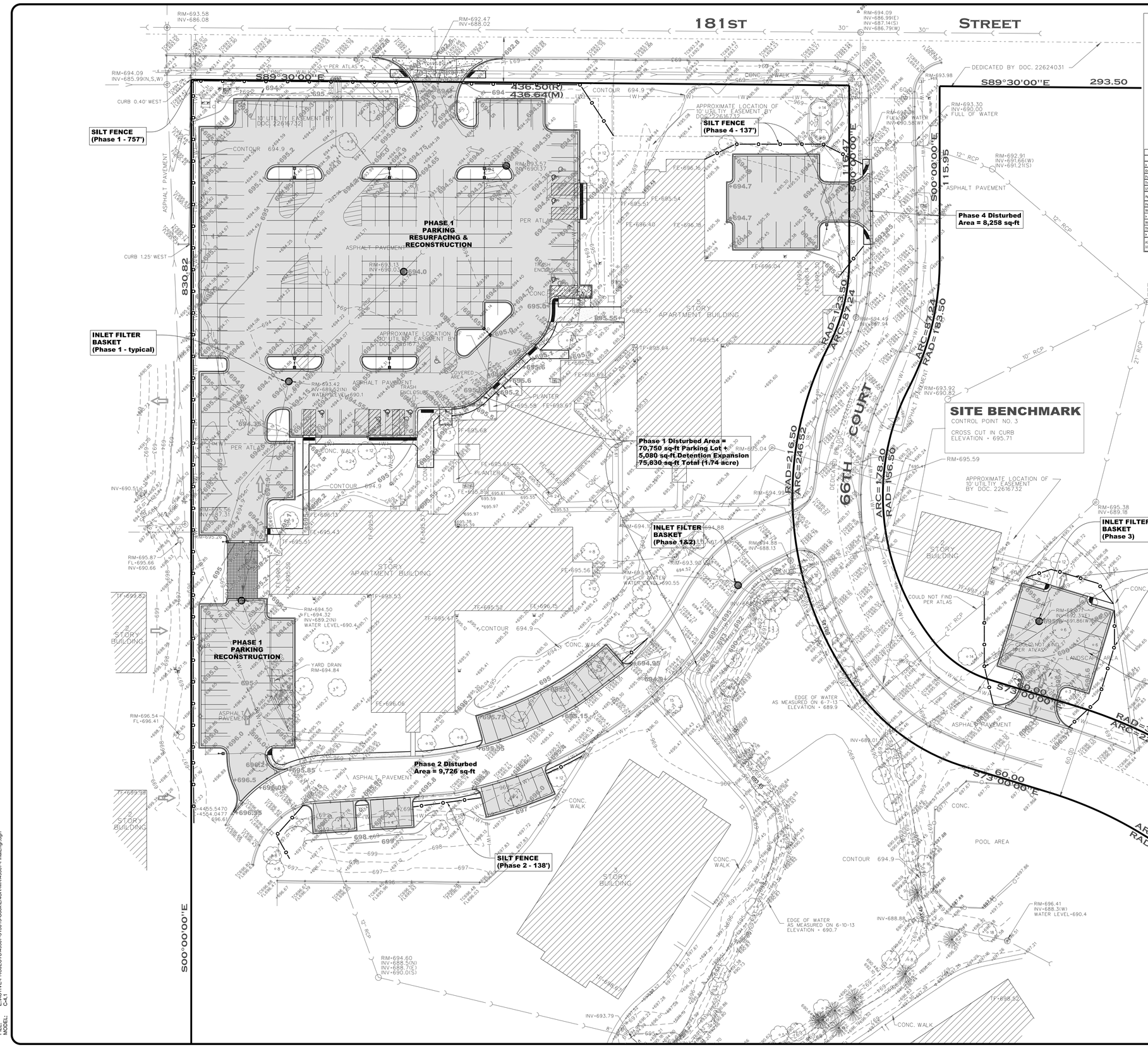
JOB # 43307	SURV: JCV
DRAWN: RLS	REVIEW: SMR
SCALE: 1"=30'	DATE: 05-12-2014

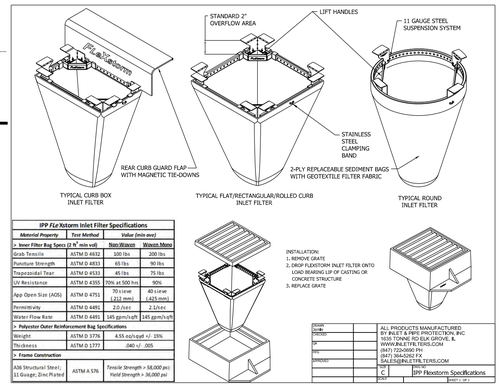
SHEET NAME

GRADING & UTILITY PLAN

SHEET # C-3

DATE: 2/18/2015
FILE: E:\ACTIVE-PROJECTS\43307-313613-Cook\ENGR-MR\43307-Final\Engr.dgn
MODEL: C-3



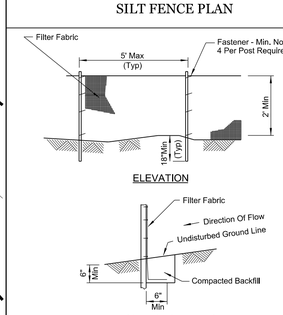


IPP Flex Katorm Inlet Filter Specifications			
Material Property	Test Method	Value (min ave)	
> Inner Filter Bag Specs (2 ft² min roll)		Non-Woven	Woven Mono
Grab Tensile	ASTM D 4632	100 lbs	200 lbs
Puncture Strength	ASTM D 4833	65 lbs	90 lbs
Trapezoidal Tear	ASTM D 4533	45 lbs	75 lbs
UV Resistance	ASTM D 4355	70% at 500 hrs	90%
App Open Size (AOS)	ASTM D 4751	70 sieve (.212 mm)	40 sieve (.425 mm)
Permittivity	ASTM D 4491	2.0 /sec	2.1/sec
Water Flow Rate	ASTM D 4491	145 gpm/sqft	145 gpm/sqft
> Polyester Outer Reinforcement Bag Specifications			
Weight	ASTM D 3776	4.55 oz/sqyd +/- 15%	
Thickness	ASTM D 1777	.040 +/ .005	
> Frame Construction			
A36 Structural Steel; 11 Gauge; Zinc Plated	ASTM A 576	Tensile Strength = 58,000 psi; Yield Strength = 36,000 psi	

INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE

DRAWN BY:	ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTOR, INC
CHECKED BY:	1655 TOWNE RD ELK GROVE, IL
	WWW.INLETPROTERS.COM
	(847) 720-0990 PH
DATE:	(847) 364-5267 FX
APPROVED BY:	SALES@INLETPROTERS.COM
	IPP Flexstorm Specifications
	SHEET 1 OF 1

SILT FENCE PLAN

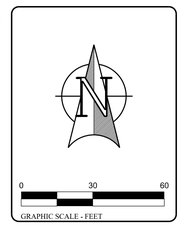


NOTES:
1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 50 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 30 sq. in.

REFERENCE			
Project			
Designed		Date	
Checked		Date	
Approved		Date	

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-620 SHEET 1 OF 1 DATE: 1-20-01



Edenbridge Apartments Parking Expansion

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

Webster, McGrath & Ahlberg, Ltd.
Land Surveying · Civil Engineering · Landscape Architecture
207 South Northwest Highway, Barrington, Illinois 60010
Phone: (847) 382-3300 Fax: (847) 382-3311
Design Firm License No. 184-003101
Over 100 Years of Service to Clients

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-15-2014	Additional Topographic information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grassicrete and show snow storage locations	SMR

Sections-Township-Range
Cook: SE¼ 31-36-13

JOB # 43307	SURV: JCV
DRAWN: RLS	REVIEW: SMR
SCALE: 1"=30'	DATE: 05-12-2014

SHEET NAME
Erosion Control Plan

SHEET # C-4.1

DATE: 2/18/2015
FILE: E:\ACTIVE-PROJECTS\43307-313813-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: C-4.1

STORM WATER POLLUTION PREVENTION PLAN

THE FOLLOWING PLAN IS ESTABLISHED AND INCORPORATED INTO THE PROJECT TO DIRECT THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE UNDER NPDES.

THE PURPOSE OF THIS PLAN IS TO MINIMIZE EROSION WITHIN THE CONSTRUCTION SITE AND TO LIMIT SEDIMENTS FROM LEAVING THE CONSTRUCTION SITE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE AMOUNT OF TIME.

CERTAIN EROSION CONTROL FACILITIES SHALL BE INSTALLED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE INSTALLED BYTHE CONTRACTOR AS DIRECTED BY THE ENGINEER ON A CASE BY CASE SITUATION DEPENDING ON THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF YEAR, AND EXPECTED WEATHER CONDITIONS.

THE CONTRACTOR SHALL INSTALL PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A TIME FRAME SPECIFIED HEREIN AND AS DIRECTED BY THE ENGINEER, THEREFORE MINIMIZING THE AMOUNT OF AREA SUSCEPTIBLE TO EROSION AND REDUCING THE AMOUNT OF TEMPORARY SEEDING. THE ENGINEER WILL DETERMINE IF ANY TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLAN CAN BE DELETED AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL SYSTEMS, WHICH ARE NOT INCLUDED IN THIS PLAN, SHALL BE ADDED. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN IN THE DETAILS.

SITE DESCRIPTION

A. DESCRIPTION OF CONSTRUCTION ACTIVITIES:

1. THE PROJECT CONSISTS OF PARKING LOT RECONSTRUCTION AND PARKING LOT ADDITIONS.

2. CONSTRUCTION ACTIVITIES INCLUDE:

EARTH EXCAVATION AND EMBANKMENT.

TRENCHING FOR UTILITY AND STORM SEWER INSTALLATION (PHASE 4).

VARIOUS PAVEMENT ITEMS, INCLUDING SIDEWALKS, PARKING LOTS AND DRIVEWAYS.

LANDSCAPING.

OTHER MISCELLANEOUS ITEMS OF CONSTRUCTION.

B. DESCRIPTION OF INTENDED SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES WHICH WILL DISTURB MAJOR PORTIONS OF THE CONSTRUCTION SITE:

1. CLEAR VEGETATION.

2. MASS GRADING.

3. TRENCHING FOR UTILITIES.

4. FINE GRADING FOR ROAD IMPROVEMENTS.

5. FINAL LOT GRADING.

C. AREA OF THE CONSTRUCTION SITE:

THE TOTAL AREA OF THE SUBJECT PROPERTY IS 13.307 ACRES.
PHASE 1 DISTURBED AREA = 1.74 acre
PHASE 2 DISTURBED AREA = 0.22 acre
PHASE 3 DISTURBED AREA = 0.17 acre
PHASE 4 DISTURBED AREA = 0.19 acre

D. OTHER REPORTS, STUDIES AND PLANS WHICH AID IN THE DEVELOPMENT OF THE STORM WATER POLLUTION PREVENTION PLAN AS REFERENCED DOCUMENTS:

1. THE ESTIMATED RUNOFF COEFFICIENTS OFTHE VARIOUS AREAS OF THE SITE AFTER CONSTRUCTION ACTIVITIES ARE COMPLETED ARE CONTAINED IN THE PROJECT DRAINAGE STUDY WHICH IS HEREBY INCORPORATED BY REFERENCE INTO THIS PLAN.

2. INFORMATION OF THE SOILS AND TERRAIN WITHIN THE SITE WAS OBTAINED FROM TOPOGRAPHIC SURVEYS AND SOIL BORINGS THAT WERE UTILZED FOR THE DEVELOPMENT OF THE PROPOSED TEMPORARY EROSION CONTROL SYSTEMS.

3. PROJECT PLAN DOCUMENTS, SPECIFICATIONS AND SPECIAL PROVISIONS, AND PLAN DRAWINGS INDICATING DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER GRADING ACTIVITIES WERE UTILIZED FOR THE PROPOSED PLACEMENT OF THE TEMPORARY EROSION CONTROL SYSTEMS.

E. DRAINAGE TRIBUTARIES AND SENSITIVE AREAS RECEIVING RUNOFF FROM CONSTRUCTION SITE:

1. THIS SITE CURRENTLY DRAINS THROUGH STORM SEWER TO A WET DETENTION BASIN (POND) WHICH DISCHARGES THROUGH AN 18" STORM SEWER TO THE VILLAGE OF TINLEY PARK PUBLIC STORM SEWER ALONG 183rd STREET TO THE NORTH. THIS STORM SEWER IS ULTIMATELY TRIBUTARY TO UNION DITCH.

CONTROLS: EROSION AND SEDIMENT CONTROLS

DESCRIPTION OF STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION:

1. THE DRAWINGS, SPECIFICATIONS AND SPECIAL PROVISIONS WILL ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE ATTAINABLE AND DISTURBED PORTIONS OF THE SITE WILL BE STABILIZED. STABILIZATION PRACTICES INCLUDE: TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, PROTECTION OF TREES, PRESERVATION OF MATURE VEGETATION, AND OTHER APPROPRIATE MEASURES AS DIRECTED BY THE ENGINEER. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

(a.) AREAS OF EXISTING VEGETATION (WOOD AND GRASSLANDS) OUTSIDE THE PROPOSED CONSTRUCTION LIMITS SHALL BE IDENTIFIED BY THE ENGINEER FOR PRESERVING AND SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES.

(b.) DEAD, DISEASED, OR UNSUITABLE VEGETATION WITHIN THE SITE SHALL BE REMOVED AS DIRECTED BY THE ENGINEER, ALONG WITH REQUIRED TREE REMOVAL.

(c.) AS SOON AS REASONABLE ACCESS IS AVAILABLE TO ALL LOCATIONS WHERE WATER DRAINS AWAY FROM THE PROJECT, TEMPORARY DITCH CHECKS, INLET AND PIPE PROTECTION, AND PERIMETER EROSION BARRIER SHALL BE INSTALLED AS CALLED OUT IN THIS PLAN AND DIRECTED BY THE ENGINEER.

(d.) BARE AND SPARSELY VEGETATED GROUND IN HIGH ERODABLE AREAS AS DETERMINED BY THE ENGINEER SHALL BE TEMPORARILY SEEDED AT THE BEGINNING OF CONSTRUCTION WHERE NO CONSTRUCTION ACTIVITIES ARE EXPECTED WITHIN 7 DAYS.

(e.) IMMEDIATELY AFTER TREE REMOVAL IS COMPLETED, AREAS WHICH ARE HIGHLY ERODABLE AS DETERMINED BY THE ENGINEER SHALL BE TEMPORARILY SEEDED WHEN NO CONSTRUCTION ACTIVITIES ARE EXPECTED WITHIN 7 DAYS.

(f.) AT LOCATIONS WHERE A SIGNIFICANT AMOUNT OF WATER DRAINS INTO THE CONSTRUCTION ZONE FROM OUTSIDE AREAS (ADJACENT LANDOWNERS), TEMPORARY DITCH CHECKS WILL BE UTILIZED TO LOCALLY DIVERT WATER, REDUCE FLOW RATES, AND COLLECT OUTSIDE SILTATION INSIDE THE PROPERTY LINE.

2. ESTABLISHMENT OF THESE TEMPORARY EROSION CONTROL MEASURES WILL HAVE ADDITIONAL BENEFITS TO THE PROJECT. DESIRABLE GRASS SEED WILL BECOME ESTABLISHED IN THESE AREAS AND WILL SPREAD SEEDS ONTO THE CONSTRUCTION SITE UNTIL PERMANENT SEEDING/MOWING AND OVERSEEDING CAN BE COMPLETED.

DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION:

1. DURING CONSTRUCTION, AREAS OUTSIDE THE CONSTRUCTION LIMITS AS OUTLINED PREVIOUSLY HEREIN SHALL BE PROTECTED. THE CONTRACTOR SHALL NOT USE THIS AREA FOR STAGING (EXCEPT AS DESCRIBED ON THE PLANS AND DIRECTED BYTHE ENGINEER), PARKING OF VEHICLES OR CONSTRUCTION EQUIPMENT, STORAGE OF MATERIALS, OR OTHER CONSTRUCTION RELATED ACTIVITIES.

2. SEDIMENT COLLECTED DURING CONSTRUCTION BY THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR EARTH EXCAVATION AND EROSION CONTROL.

3. THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING. THE COST OF THIS REMOVAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR VARIOUS TEMPORARY EROSION CONTROL PAY ITEMS.

4. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE FUNCTIONAL BEFORE LAND IS OTHERWISE DISTURBED ON SITE.

5. SURFACES OF STRIPPED AREAS SHALL BE PERMANENTLY OR TEMPORARILY PROTECTED FROM SOIL EROSION WITHIN 14 DAYS AFTER FINAL GRADE IS ACHIEVED. STRIPPED AREAS NOT AT FINAL GRADE THAT WILL REMAIN EXPOSED FOR MORE THAN 14 DAYS AFTER INITIAL DISTURBANCE SHALL BE PROTECTED FROM EROSION.

6. IF AN EARTH STOCKPILE IS TO REMAIN IN PLACE FOR MORE THAN 3 DAYS, THEN SEDIMENT AND EROSION CONTROL DEVICES SHALL BE PROVIDED FOR SAID STOCKPILE.

7. WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION DEWATERING SHALL BE FILTERED.

8. ANY SOIL, MUD, OR DEBRIS WASHED, TRACKED, OR DEPOSITED ONTO THE STREETS SHALL BE REMOVED IMMEDIATELY.

DESCRIPTION OF STRUCTURAL PRACTICES DURING CONSTRUCTION:

1. STORM SEWER INLETS SHALL BE PROTECTED WITH SEDIMENT TRAPPING OR FILTER CONTROL DEVICES DURING CONSTRUCTION.

2. SILT FENCES SHALL BE ESTABLISHED AT THE LIMITS OF CONSTRUCTION TO PROTECT AGAINST DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE.

3. VEHICULAR ACCESS TO THE SITE SHALL BE RESTRICTED TO A GRAVEL STABILIZED CONSTRUCTION ENTRANCE DRIVE.

DESCRIPTION OF STRUCTURAL PRACTICES AFTER FINAL GRADING:

1. TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS SEEDED AND ESTABLISHED.

2. ONCE PERMANENT EROSION CONTROL SYSTEMS AS PROPOSED IN THE PLANS ARE FUNCTIONAL AND ESTABLISHED, TEMPORARY ITEMS SHALL BE REMOVED, CLEANED UP, AND DISTURBED TURF RESEEDED.

CONTROLS: STORM WATER MANAGEMENT CONTROLS

DESCRIPTION OF MEASURES TO BE INSTALLED TO CONTROL POLLUTANTS IN STORM WATER DISCHARGES THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED:

1. A PERMANENT STORM WATER DETENTION STRUCTURE WILL BE CONSTRUCTED FOR ATTENUATION OF SURFACE FLOWS.

2. RIP RAP VELOCITY DISSIPATION DEVICES WILL BE PLACED AT DISCHARGE LOCATIONS.

MAINTENANCE AFTER CONSTRUCTION:

1. CONSTRUCTION IS COMPLETE AFTER FINAL INSPECTION AND ACCEPTANCE BY THE VILLAGE OF TINLEY PARK. MAINTENANCE UP TO THIS DATE WILL BE BY THE CONTRACTOR.

MISCELLANEOUS:

1. TEMPORARY DITCH CHECKS SHALL BE LOCATED AT EVERY 1.5 FT. FALL/RISE IN DITCH GRADE.

2. TEMPORARY EROSION CONTROL SEEDING SHALL BE APPLIED AT THE RATE OF 100 LBS./ACRE.

3. STRAW BALES, HAY BALES, PERIMETER EROSION BARRIER AND SILT FENCES WILL NOT BE PERMITTED FOR TEMPORARY OR PERMANENT DITCH CHECKS. DITCH CHECKS SHALL BE COMPOSED OF AGGREGATE, SILT PANELS, ROLLED EXCELSIOR, URETHANE FOAM/GEOTEXTILE (SILT WEDGES), AND /OR ANY OTHER MATERIAL APPROVED BY THE EROSION AND SEDIMENT CONTROL COORDINATOR.

4. ALL EROSION CONTROL PRODUCTS FURNISHED SHALL BE SPECIFICALLY RECOMMENDED BY THE MANUFACTURER FOR THE USE SPECIFIED IN THE EROSION CONTROL PLAN. PRIOR TO THE APPROVAL AND USE OF THE PRODUCT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A NOTARIZED CERTIFICATION BY THE PRODUCER STATING THE INTENDED USE OF THE PRODUCT AND THAT THE PHYSICAL PROPERTIES REQUIRED FOR THIS APPLICATION ARE MET OR EXCEEDED. THE CONTRACTOR SHALL PROVIDE MANUFACTURER INSTALLATION PROCEDURES TO FACILITATE THE ENGINEER IN CONSTRUCTION INSPECTION.

INSPECTIONS:

Qualified personnel (provided by the permittee) shall inspect disturbed areas of the construction site that have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall. Qualified personnel means a person knowledgeable in the principles and practices of erosion and sediment controls measures, such as a licensed Professional Engineer (P .E.), a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Erosion Sediment and Storm Water Inspector (CESSWI) or other knowledgeable person who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activities.

a. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

b. Based on the results of the inspection, the description of potential pollutant sources identified in the plan in accordance with Part IV.D.1 (Site Description) of this permit and pollution prevention measures identified in the plan in accordance with Part IV.D.2 (Controls) of this permit shall be revised as appropriate as soon as practicable after such inspection. Such modifications shall provide for timely implementation of any changes to the plan 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 storm water pollution prevention plan, and actions taken in accordance with paragraph b above shall be made and retained as part of the storm water pollution prevention plan for at least three years from the date that the permit coverage expires or is terminated. All inspection reports shall be retained at the construction site. The report shall be signed in accordance with Part VI.G (Signatory Requirements) of this permit.

d. The permittee shall notify the appropriate Agency Field Operations Section office by email at: epa.swnoncomp@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 violations of any condition of this permit. The permittee shall complete and submit within 5 days an "Incidence of Noncompliance" (ION) report for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit. Submission shall be on forms provided by the Agency and include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance.

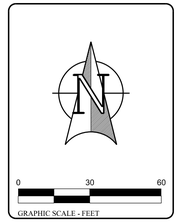
e. All reports of noncompliance shall be signed by a responsible authority as defined in Part VI.G (Signatory Requirements).

f. After the initial contact has been made with the appropriate Agency Field Operations Section Office, all reports of noncompliance shall be mailed to the Agency 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

NON-STORM WATER DISCHARGES:

Except for flows from fire fighting activities, there shall be no sources of non-storm water combined with the storm water discharge.



EDENBRIDGE APARTMENTS PARKING EXPANSION

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

WEBSTER, MCGRATH & AHLBERG, LTD.
WMA
LAND SURVEYING · CIVIL ENGINEERING · LANDSCAPE ARCHITECTURE
Over 100 Years of Service to Clients
207 SOUTH NAPERVILLE ROAD, WHEATON, ILLINOIS 60187
PH: (630) 668-1211 FAX: (630) 668-5789
DESIGN FIRM LICENSE NO. 184-003101

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-13-2014	Additional Topographic information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show snow storage locations	SMR

Section-Township-Range
Cook: SE¼ 31-36-13

JOB # 43307 SURV: JCV
DRAWN: RLS REVIEW: SMR
SCALE: 1"=30' DATE: 05-12-2014

SHEET NAME
SWPPP NARRATIVE

SHEET # C-4.2

DATE: 2/10/2015
FILE: E:\ACTIVE-PROJECTS\43307-313813-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: C-4.2

Illinois Environmental Protection Agency

Bureau of Water 1021 North Grand Avenue East P.O. Box 19276 Springfield Illinois 62794-9276

Division of Water Pollution Control
Notice of Intent (NOI) for General Permit
to Discharge Storm Water Associated with Construction Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at the above address.

For Office Use Only
Permit No. ILR10 _____

OWNER INFORMATION

Company/Owner Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

Contact Person: _____ E-mail: _____

Owner Type (select one) _____

CONTRACTOR INFORMATION

MS4 Community: ☐ Yes ☐ No

Contractor Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

CONSTRUCTION SITE INFORMATION

Select One: ☐ New ☐ Change of information for: ILR10 _____

Project Name: _____ County: _____

Street Address: _____ City: _____ IL Zip: _____

Latitude: ___ ___ ___ Longitude: ___ ___ ___ ___ ___ ___
(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

Approximate Construction Start Date _____ Approximate Construction End Date _____

Total size of construction site in acres: _____

If less than 1 acre, is the site part of a larger common plan of development?
☐ Yes ☐ No

Fee Schedule for Construction Sites:
Less than 5 acres - $250
5 or more acres - $750

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Has the SWPPP been submitted to the Agency? ☐ Yes ☐ No
(Submit SWPPP electronically to: epa.constilr10swppp@illinois.gov)

Location of SWPPP for viewing: Address: _____ City: _____

SWPPP contact information: Inspector qualifications:

Contact Name: _____

Phone: _____ Fax: _____ E-mail: _____

Project inspector, if different from above Inspector qualifications:

Inspector's Name: _____

Phone: _____ Fax: _____ E-mail: _____

IL 532 2104 WPC 623
Rev 5/10

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

IN ORDER TO SATISFY THE EROSION CONTROL REQUIREMENTS AS OUTLINED IN THE NPDES PERMIT (ILRIO), THE FOLLOWING FORMS ARE REQUIRED:

FORM	RESPONSIBILITY	WHEN	WHERE TO SEND
STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND EROSION CONTROL PLAN: REQUIRED ON ALL PROJECTS	DESIGN ENGINEER	DURING DESIGN	SUBMIT ELECTRONICALLY TO IEPA ALONG WITH NOI AND KEEP IN PROJECT EROSION CONTROL FILE
CONTRACTOR CERTIFICATION STATEMENT (Included on this sheet)	CONTRACTORS AND ALL SUBCONTRACTORS INVOLVED IN EROSION CONTROL	AT PRECONSTRUCTION MEETING	SUBMIT IT WITH PLANS OR SPECIAL PROVISIONS AND KEEP IN PROJECT EROSION CONTROL FILE
NOTICE OF INTENT (N.O.I.) IL 532 2104 WPC 623 Rev 12/09 http://www.epa.state.il.us/water/permits/storm-water/construction.html	OPERATOR OF THE CONSTRUCTION SITE	30 DAYS BEFORE CONSTRUCTION BEGINS	POST AT JOBSITE ORIGINAL BY CERTIFIED MAIL TO IEPA DIVISION OF WATER POLLUTION CONTROL PROJECT EROSION CONTROL FILE
NPDES/EROSION CONTROL INSPECTION REPORT See example of report / checklist on IDOT website http://www.dot.state.il.us/Forms/BC%202259.docx	QUALIFIED EROSION CONTROL INSPECTOR OR P.E. HIRED BY OPERATOR OF THE SITE	WEEKLY AND AFTER MORE THAN 0.5 IN. PRECIPITATION	KEEP IN PROJECT EROSION FILE (3 YEARS) COPY TO CONTRACTOR
INCIDENCE OF NON-COMPLIANCE (I.O.N.) IL 532 2105 WPC 624 Rev. 12-09 http://www.epa.state.il.us/water/permits/storm-water/construction.html	OPERATOR OF THE CONSTRUCTION SITE	WITHIN 5 DAYS	ORIGINAL BY CERTIFIED MAIL TO IEPA DIVISION OF WATER POLLUTION CONTROL COPY TO CONTRACTOR
NOTICE OF TERMINATION (N.O.T.) IL 532 2102 WPC 621 Rev. 12/2009 http://www.epa.state.il.us/water/permits/storm-water/construction.html	OPERATOR OF THE CONSTRUCTION SITE	FINAL STABILIZATION	ORIGINAL BY CERTIFIED MAIL TO IEPA DIVISION OF WATER POLLUTION CONTROL COPY TO PROJECT EROSION FILE

THE FORMS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND ARE TO PROVIDE INFORMATION FOR THE ASSISTANCE OF THE OWNER IN PREPARING THE SUBMITTALS REQUIRED UNDER NPDES PERMIT No. ILR10.

THE OWNER MUST SIGN THE N.O.I. FORM AS PROVIDED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (I.E.P.A.) AND SUBMIT IT BY CERTIFIED MAIL TO THE AGENCY AT THE FOLLOWING ADDRESS:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
ATTENTION: PERMIT SECTION
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

NOTICE OF INTENT:

To receive authorization under this general permit (ILR10), a discharger must submit a completed Notice of Intent (NOI) in sufficient time to allow a 30 day review period after the receipt of the NOI by the Illinois Environmental Protection Agency. See IEPA website for NOI form: http://www.epa.state.il.us/water/permits/storm-water/forms/notice-intent-construction.pdf

An electronic copy of the storm water pollution prevention plan (SWPPP) that has been prepared for the site shall be submitted electronically to the IEPA at the following email address: epa.constilr10swppp@illinois.gov
NOI is not complete until receipt of electronic SWPPP and fee payment in addition to the NOI form.

A discharger may submit an NOI after the start of construction. In such instances, the IEPA may bring an enforcement action for any discharges of storm water associated with industrial activity from a construction site that have occured on or after the start of construction.

Dischargers who fail to notify the IEPA of their Intent to be covered, and discharge storm water associated with construction site activity to Waters of the State without an NPDES permit, are in violation of the Environmental Protection Act and Clean Water Act.

NOTICE OF TERMINATION:

Where a site has been finally stabilized and all storm water discharges from construction sites that are authorized by this permit (ILR10) are eliminated, the permittee of the facility must submit a completed Notice of Termination
See IEPA website for NOT form: http://www.epa.state.il.us/water/permits/storm-water/forms/notice-termination-construction.pdf

Final Stabilization means that all soil disturbing activities at the site have been completed, and either of the two following conditions are met:
(i) A uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or
(ii) Equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

MAKE DOCUMENTS PUBLICLY AVAILABLE:

All storm water pollution prevention plans (SWPPP) and all completed inspection forms/ reports required under this permit are considered reports that shall be available to the public at any reasonable time upon request. A copy of the letter of notification of coverage along with the General NPDES Permit for Storm Water Discharges from Construction Site Activities or other indication that storm water discharges from the site are covered under an NPDES permit shall be posted at the site in a prominent place for public viewing.

RETENTION OF RECORDS:

A. The permittee shall retain copies of storm water pollution prevention plans and all reports and notices required by this permit, and records of all data used to complete the Notice of Intent to be covered by this permit, for a period of at least three years from the date that the permit coverage expires or is terminated. This period may be extended by request of the Illinois Environmental Protection Agency at any time.

B. The permittee shall retain a copy of the storm water pollution prevention plan and any revisions to said plan required by this permit at the construction site from the date of project initiation to the date of final stabilization.

SEE NPDES PERMIT No. ILR10 FOR FULL REQUIREMENTS:

Copy of General NPDES Permit No. ILR10 located at: http://www.epa.state.il.us/water/permits/storm-water/general-construction-permit.pdf

CONTRACTOR SIGNATURE:

Site Name/Address: _____

General Contractor: _____

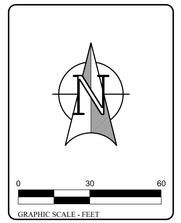
Address: _____

Phone No. _____

Name: _____
print signature

Title: _____

Date: _____



EDENBRIDGE APARTMENTS PARKING EXPANSION

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

TYPE OF CONSTRUCTION (select one)
Construction Type _____

SIC Code: _____

Type a detailed description of the project:

_____

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE

Has the project been submitted to the following state agencies to satisfy applicable requirements for compliance with Illinois law on:

Historic Preservation Agency ☐ Yes ☐ No

Endangered Species ☐ Yes ☐ No

RECEIVING WATER INFORMATION

Does your storm water discharge directly to: ☐ Waters of the State or ☐ Storm Sewer

Owner of storm sewer system: _____

Name of closest receiving water body to which you discharge: _____

Mail completed form to: Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a storm water pollution prevention plan and a monitoring program plan, will be complied with.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

_____ _____
Owner Signature: Date:

_____ _____
Printed Name: Title:

Illinois Environmental Protection Agency

Bureau of Water 1021 N. Grand Avenue E. P.O. Box 19276 Springfield Illinois 62794-9276

Division of Water Pollution Control
Construction Site Storm Water Discharge Incidence of Non-Compliance (ION)

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. You may email this completed form to: epa.swnoncomp@illinois.gov

For Office Use Only
Permit No. ILR10_____

Permittee Information:

Name: _____

Street Address: _____ P.O. Box: _____

City: _____ State: __ Zip Code: _____ County: _____

Phone: _____ Email: _____

Construction Site Information:

Site Name: _____

Street Address: _____

City: _____ State: IL Zip Code: _____

Latitude: ___ ___ ___ Longitude: ___ ___ ___ ___ ___ ___
(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

Cause of Non-Compliance

_____

Actions Taken to Prevent Any Further Non-Compliance

_____

Environmental Impact Resulting From the Non-Compliance

_____

Actions Taken to Reduce the Environmental Impact Resulting From the Non-Compliance

_____

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

_____ _____
Owner Signature: Date:

_____ _____
Printed Name: Title:

IL 532 2105 WPC
624 Rev. 10/2011

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

DIVISION OF WATER POLLUTION CONTROL
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
FIELD OPERATIONS SECTION

GUIDELINES FOR COMPLETION OF INCIDENCE OF NON-COMPLIANCE (ION) FORM

Complete and submit this form for any violation of the Storm Water Pollution Prevention Plan observed during any inspection conducted, including those not required by the SWPPP. Please adhere to the following guidelines:

Initial submission within 24 hours by email, telephone or fax (see region fax numbers) of any incidence of non-compliance for any violation. Submit email copy to: epa.swnoncomp@illinois.gov. After 24 hour notification, submit signed original ION within 5 days to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance #19
Post Office Box 19276
Springfield, Illinois 62794-9276

FIELD OPERATIONS HEADQUARTERS
Bruce Yurdin, Manager
Phone: 217/782-3362 Fax: 217/785-1225
EMAIL: epa.swnoncomp@illinois.gov

Region 1 - ROCKFORD
Chuck Corley, Manager
Phone: 815/987-7760 Fax: 815/987-7005

Region 2 - DESPLAINES
Jay Patel, Manager
Phone: 847/294-4000 Fax: 847/294-4058

Region 3 - PEORIA
Jim Kammueller, Manager
Phone: 309/693-5463 Fax: 309/693-5467

Region 4 - CHAMPAIGN
Joe Koronowski, Manager
Phone: 217/278-5800 Fax: 217/278-5808

Region 5 - SPRINGFIELD
Bruce Yurdin, FOS Manager
Phone: 217/782-3362 Fax: 217/785-1225

Region 6 - COLLINSVILLE
Bruce Yurdin, FOS Manager
Phone: 217/782-3362 Fax: 217/785-1225

Region 7 - MARION
Byron Marks, Manager
Phone: 618/993-7200 Fax: 618/997-5467

Illinois Environmental Protection Agency

Bureau of Water 1021 North Grand Avenue East P.O. Box 19276 Springfield Illinois 62794-9276

Division of Water Pollution Control
NOTICE OF TERMINATION (NOT)
of Coverage under the General Permit for Storm Water Discharges Associated with Construction Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at the above address.

Permit No. ILR10 _____

OWNER INFORMATION

Owner Name: _____

Owner Type (select one) _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

Contact Person: _____ E-mail: _____

CONTRACTOR INFORMATION

Contractor Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

CONSTRUCTION SITE INFORMATION

Facility Name: _____

Street Address: _____

City: _____ IL Zip: _____ County: _____

NPDES Storm Water General Permit Number: ILR10

Latitude: ___ ___ ___ Longitude: ___ ___ ___ ___ ___ ___
(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

DATE PROJECT HAS BEEN COMPLETED AND STABILIZED: _____

NOTE: Coverage under this permit cannot be terminated without the completion date.

I certify under penalty of law that disturbed soils at the identified facility have been finally stabilized or that all storm water discharges associated with industrial activity from the identified facility that are authorized by an NPDES general permit have otherwise been eliminated. I understand that by submitting this notice of termination, that I am no longer authorized to discharge storm water associated with industrial activity by the general permit, and that discharging pollutants in storm water associated with industrial activity to Waters of the State is unlawful under the Environmental Protection Act and the Clean Water Act where the discharge is not authorized by an NPDES Permit.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

_____ _____
Owner Signature: Date:

Mail completed form to: Illinois Environmental Protection Agency
Division of Water Pollution Control, Attn: Permit Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
(Do not submit additional documentation unless requested)

IL 532 2102
WPC 621 Rev 12/11

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

WEBSTER, MCGRATH & AHLBERG, LTD.
LAND SURVEYING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE
207 SOUTH WAUKEGAN ROAD, WAUKEGAN, ILLINOIS 60087
PHONE (847) 623-1700 FAX (847) 623-1703
DESIGN FIRM LICENSE NO. 184003101
WMA
Over 100 Years of Service to Clients

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-13-2014	Additional Topographic Information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show storage locations	SMR

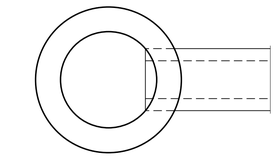
Section-Township-Range
Cook: SE¼ 31-36-13

JOB # 43307	SURV: JCV
DRAWN: RLS	REVIEW: SMR
SCALE: 1"=30'	DATE: 05-12-2014

SHEET NAME
SWPPP FORMS & NOTES

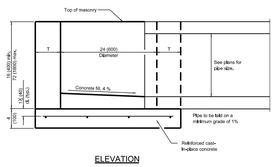
SHEET #
C-4.3

DATE: 2/10/2015
FILE: E:\ACTIVE-PROJECTS\43307-313813-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: C-4.3

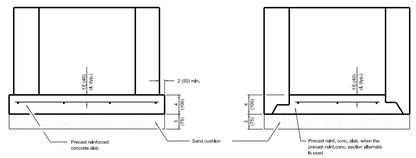


PLAN

ALTERNATE MATERIALS FOR WALLS	T
BRICK MASONRY	2 (305)
CAST-IN-PLACE CONCRETE	2 (305)
CONCRETE MASONRY UNIT	3 (76)
PRECAST REINFORCED CONCRETE SECTION	3 (75)



ELEVATION



ALTERNATE METHODS

GENERAL NOTES

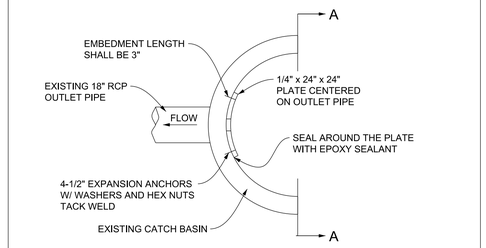
Bottom slabs shall be reinforced with a minimum of 0.24 sq.in./ft. (510 sq. mm/m) in both directions with a maximum spacing of 10 (250).

Bottom slabs may be connected to the riser as determined by the fabricator; however, only a single row of reinforcement around the perimeter may be utilized.

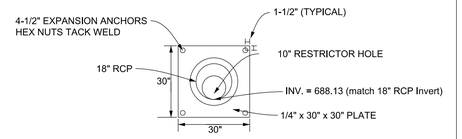
All dimensions are in inches (millimeters) unless otherwise shown.

INLET - TYPE A

STANDARD 602301-04



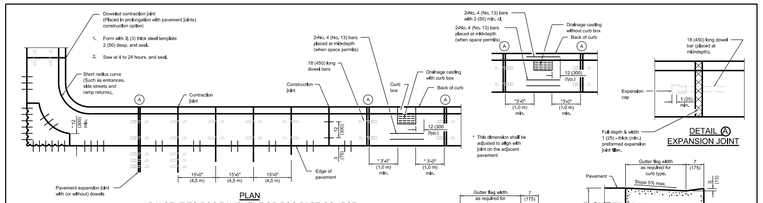
PLAN



SECTION A-A

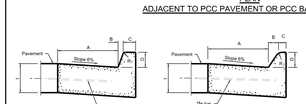
NOTE:

1. PLATE SHALL BE CURVED TO MATCH THE INSIDE RADIUS OF THE CATCH BASIN.
2. THE RESTRICTOR PLATE AND FASTENERS SHALL BE FABRICATED IN STAINLESS STEEL OR DUCTILE IRON.
3. RESTRICTOR MOUNTING BOLTS SHALL BE TACK WELDED TO THE RESTRICTOR PLATE.



PLAN
ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE

DETAIL (A)
EXPANSION JOINT



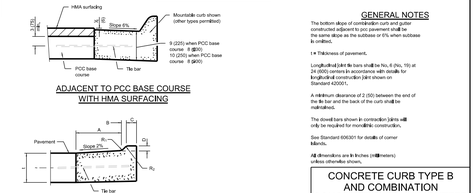
BARRIER CURB

MOUNTABLE CURB

TABLE OF DIMENSIONS BARRIER CURB					
TYPE	A	B	C	D	R_1
B4.06 * (M-5.15)	6 (150)	1 (25)	6 (150)	6 (150)	1 (25)
B4.12 (M-5.30)	12 (300)	1 (25)	6 (150)	6 (150)	1 (25)
B6.18 (M-5.45)	18 (450)	1 (25)	6 (150)	6 (150)	1 (25)
B4.24 (M-5.60)	24 (600)	1 (25)	6 (150)	6 (150)	1 (25)
B4.12 (M-22.30)	12 (300)	2 (50)	6 (150)	6 (150)	2 (50)
B6.18 (M-22.45)	18 (450)	2 (50)	6 (150)	6 (150)	2 (50)
B4.24 (M-22.60)	24 (600)	2 (50)	6 (150)	6 (150)	2 (50)

* For corner islands only.

TABLE OF DIMENSIONS MOUNTABLE CURB						
TYPE	A	B	C	D	R_1	R_2
M2.06 (M-5.15)	6 (150)	2 (50)	4 (100)	2 (50)	3 (75)	2 (50)
M2.12 (M-5.30)	12 (300)	2 (50)	4 (100)	2 (50)	3 (75)	2 (50)
M4.06 (M-5.45)	6 (150)	4 (100)	4 (100)	3 (75)	3 (75)	NA
M4.12 (M-5.60)	12 (300)	4 (100)	4 (100)	3 (75)	3 (75)	NA
M4.18 (M-5.75)	18 (450)	4 (100)	4 (100)	3 (75)	3 (75)	NA
M4.24 (M-5.90)	24 (600)	4 (100)	4 (100)	3 (75)	3 (75)	NA
M6.06 (M-5.15)	6 (150)	6 (150)	4 (100)	3 (75)	3 (75)	NA
M6.12 (M-5.30)	12 (300)	6 (150)	4 (100)	3 (75)	3 (75)	NA
M6.18 (M-5.45)	18 (450)	6 (150)	4 (100)	3 (75)	3 (75)	NA
M6.24 (M-5.60)	24 (600)	6 (150)	4 (100)	3 (75)	3 (75)	NA



DEPRESSED CURB (TYPICAL)

DEPRESSED CURB ADJACENT TO CURB RAMP ACCESSIBLE TO THE DISABLED

ADJACENT TO PCC BASE COURSE WITH HMA SURFACING

M-2.06 (M-5.15) and M-2.12 (M-5.30)

GENERAL NOTES

The bottom slope of combination curb and gutter constructed adjacent to pcc pavement shall be the same slope as the subbase or 5% when subbase is omitted.

t = Thickness of pavement.

Longitudinal joint tie bars shall be No. 6 (No. 19) at 24 (600) centers in accordance with details for longitudinal construction joint shown on Standard 420001.

A minimum clearance of 2 (50) between the end of the tie bar and the back of the curb shall be maintained.

The dowel bars shown in contraction joints will only be required for monolithic construction.

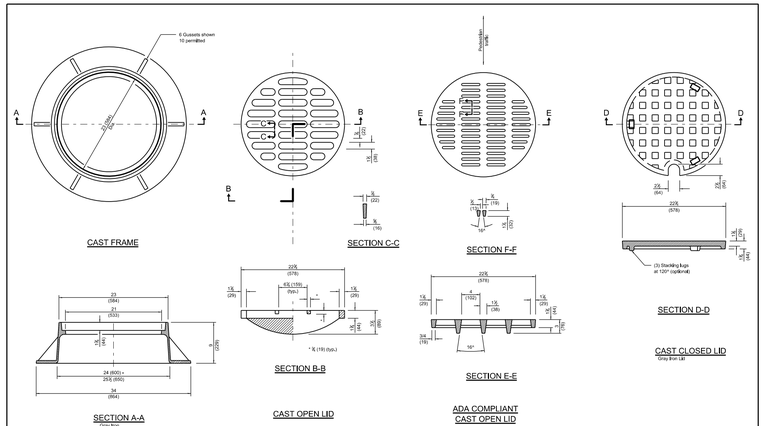
See Standard 606301 for details of corner islands.

All dimensions are in inches (millimeters) unless otherwise shown.

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

(Sheet 1 of 2)

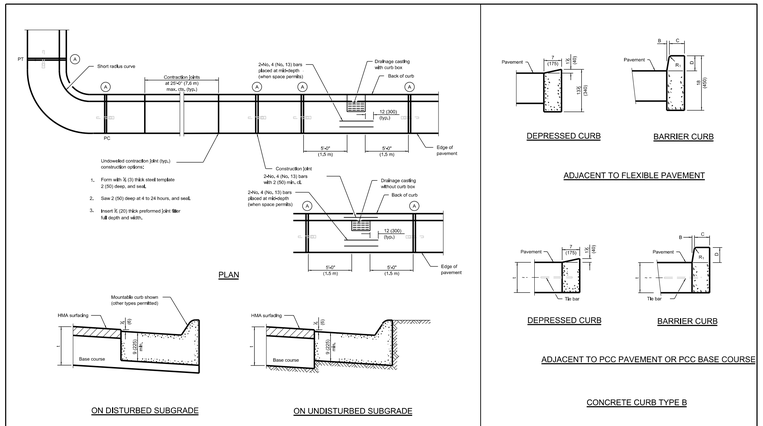
STANDARD 606001-06



All dimensions are in inches (millimeters) unless otherwise shown.

FRAME AND LIDS TYPE 1

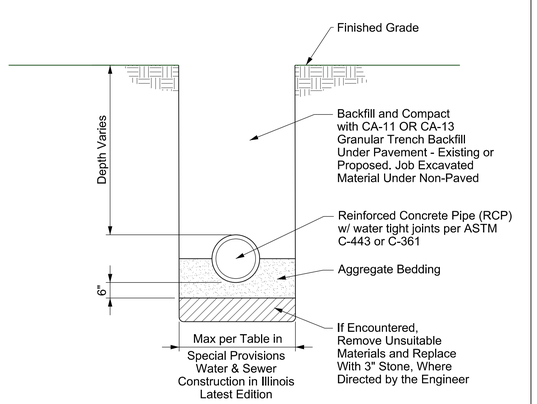
STANDARD 604001-04



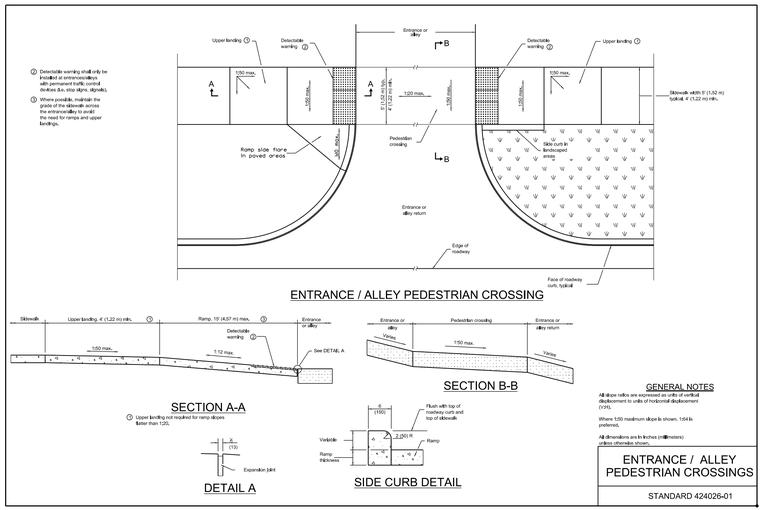
CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

(Sheet 2 of 2)

STANDARD 606001-06



TRENCH FOR STORM SEWER



GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where 1:50 maximum slope is shown, 1:54 is preferred.

All dimensions are in inches (millimeters) unless otherwise shown.

ENTRANCE / ALLEY PEDESTRIAN CROSSINGS

STANDARD 424026-01

EDENBRIDGE APARTMENTS PARKING EXPANSION

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

WEBSTER, MCGRATH & AHLBERG, LTD.
LAND SURVEYING · CIVIL ENGINEERING · LANDSCAPE ARCHITECTURE
Over 100 Years of Service to Clients
207 SOUTH NAPERVILLE ROAD, WHEATON, ILLINOIS 60187
PH: (630)653-2600 FAX: (630)653-2601
DESIGN FIRM LICENSE NO. 184-003101

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-13-2014	Additional Topographic Information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show snow storage locations	SMR

Section-Township-Range
Cook: SE¼ 31-36-13

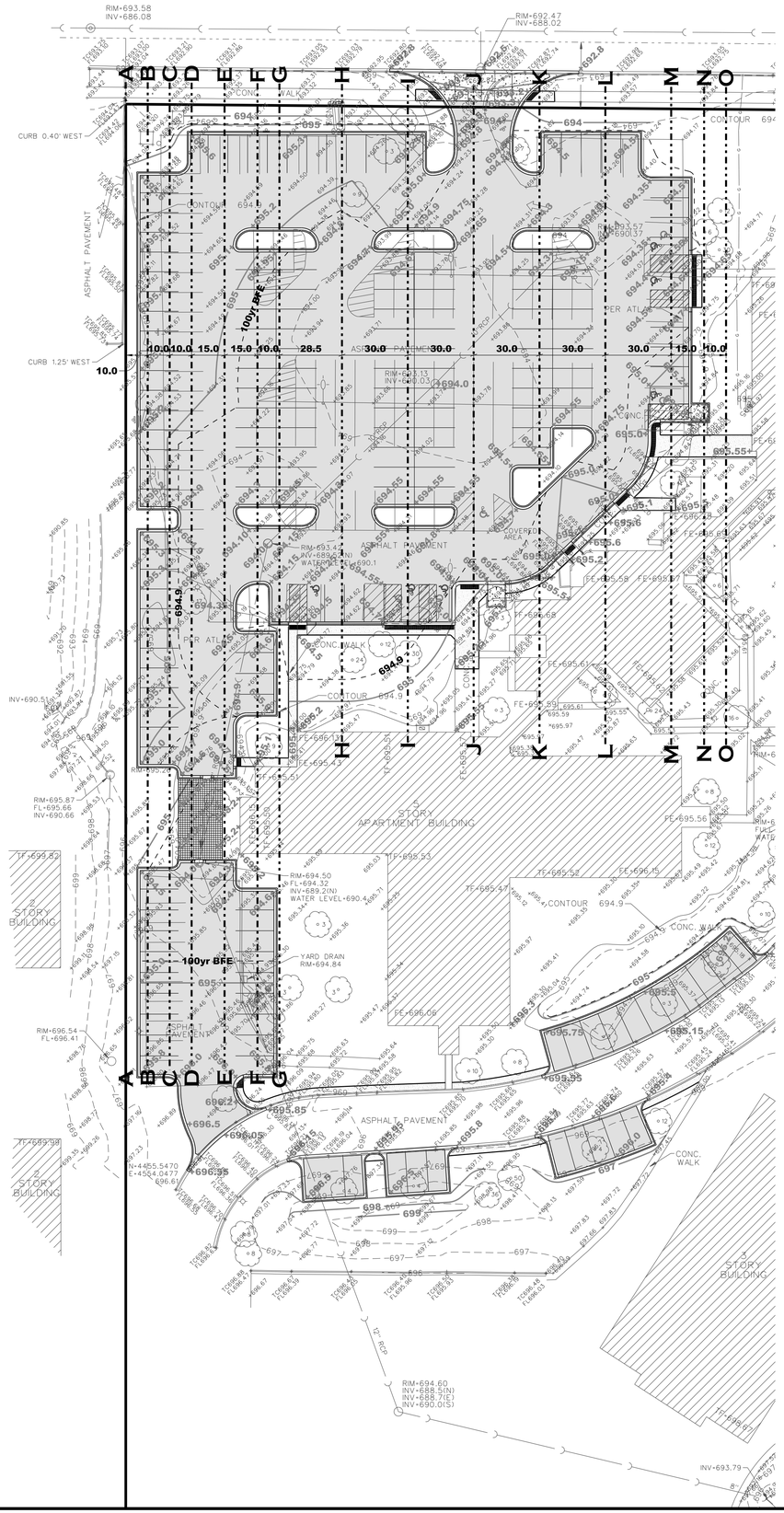
JOB # 43307	SURV: JCV
DRAWN: RLS	REVIEW: SMR
SCALE: 1"=30'	DATE: 05-12-2014

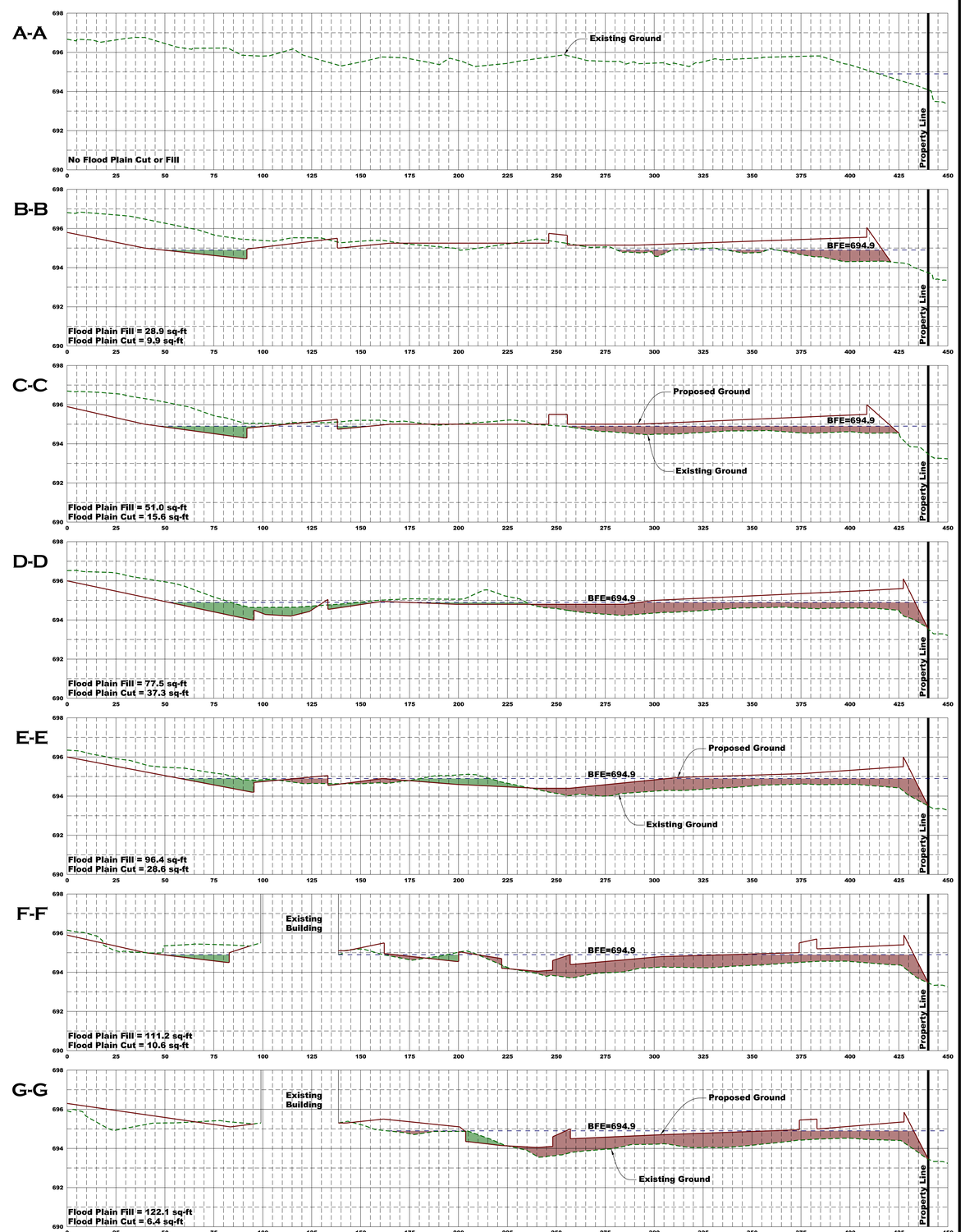
SHEET NAME

DETAILS

SHEET # C-5

DATE: 2/10/2015
FILE: E:\ACTIVE-PROJECTS\43307-313813-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: C-5





0 30 60
GRAPHIC SCALE - FEET

EDENBRIDGE APARTMENTS PARKING EXPANSION

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

WEBSTER, McGRATH & AHLBERG, LTD.
LAND SURVEYING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE
WMA
Over 100 Years of Service to Clients
207 SOUTH WHITEHALL ROAD, WHEATON, ILLINOIS 60187
PHONE: (630) 668-1988 FAX: (630) 668-1989
DESIGN FIRM LICENSE NO. 184003101

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-13-2014	Additional Topographic Information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show snow storage locations	SMR

Section-Township-Range
Cook: SE¼ 31-36-13

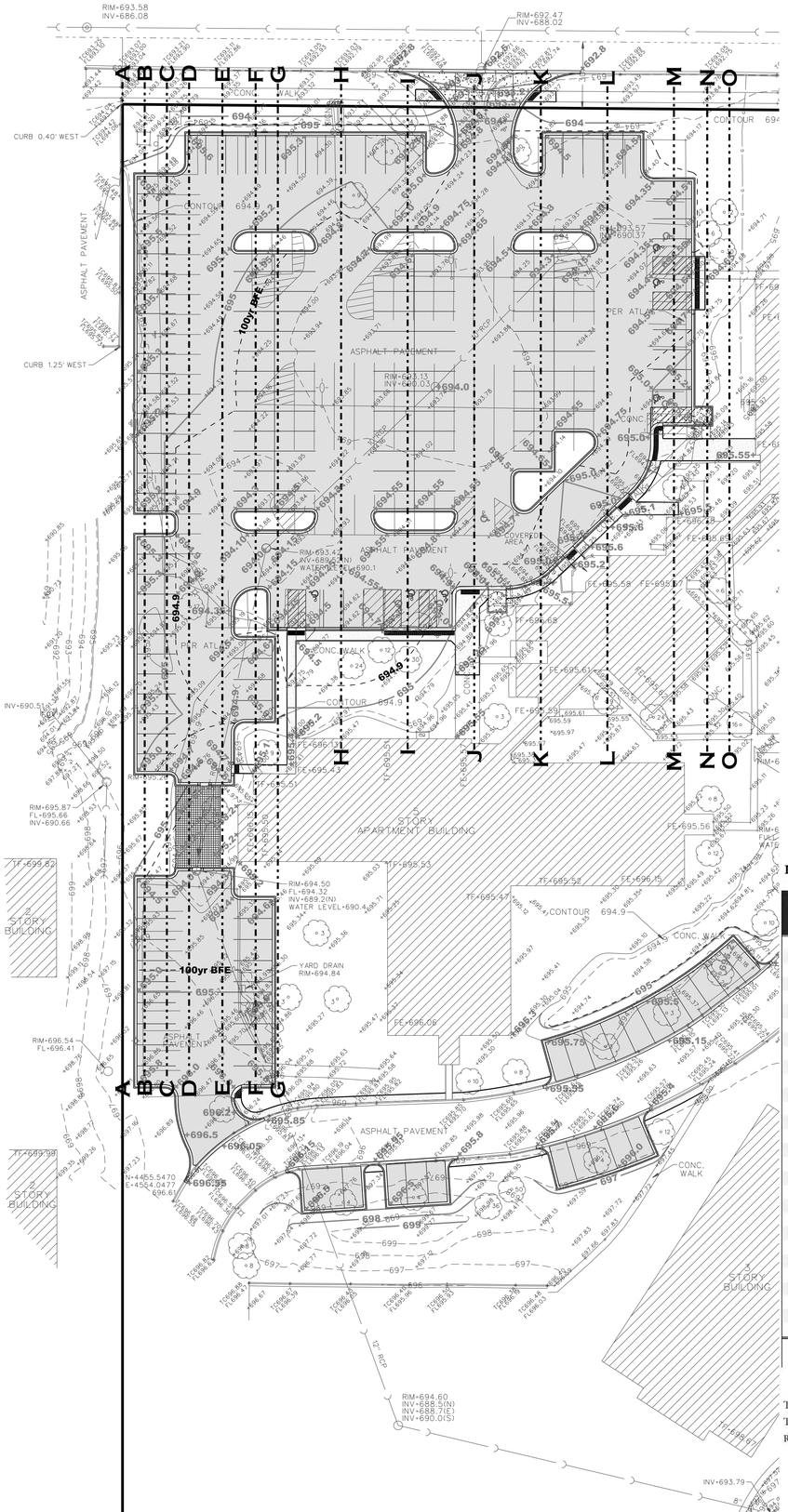
JOB # 43307	SURV: JCV
DRAWN: RLS	REVIEW: SMR
SCALE: 1"=30'	DATE: 05-12-2014

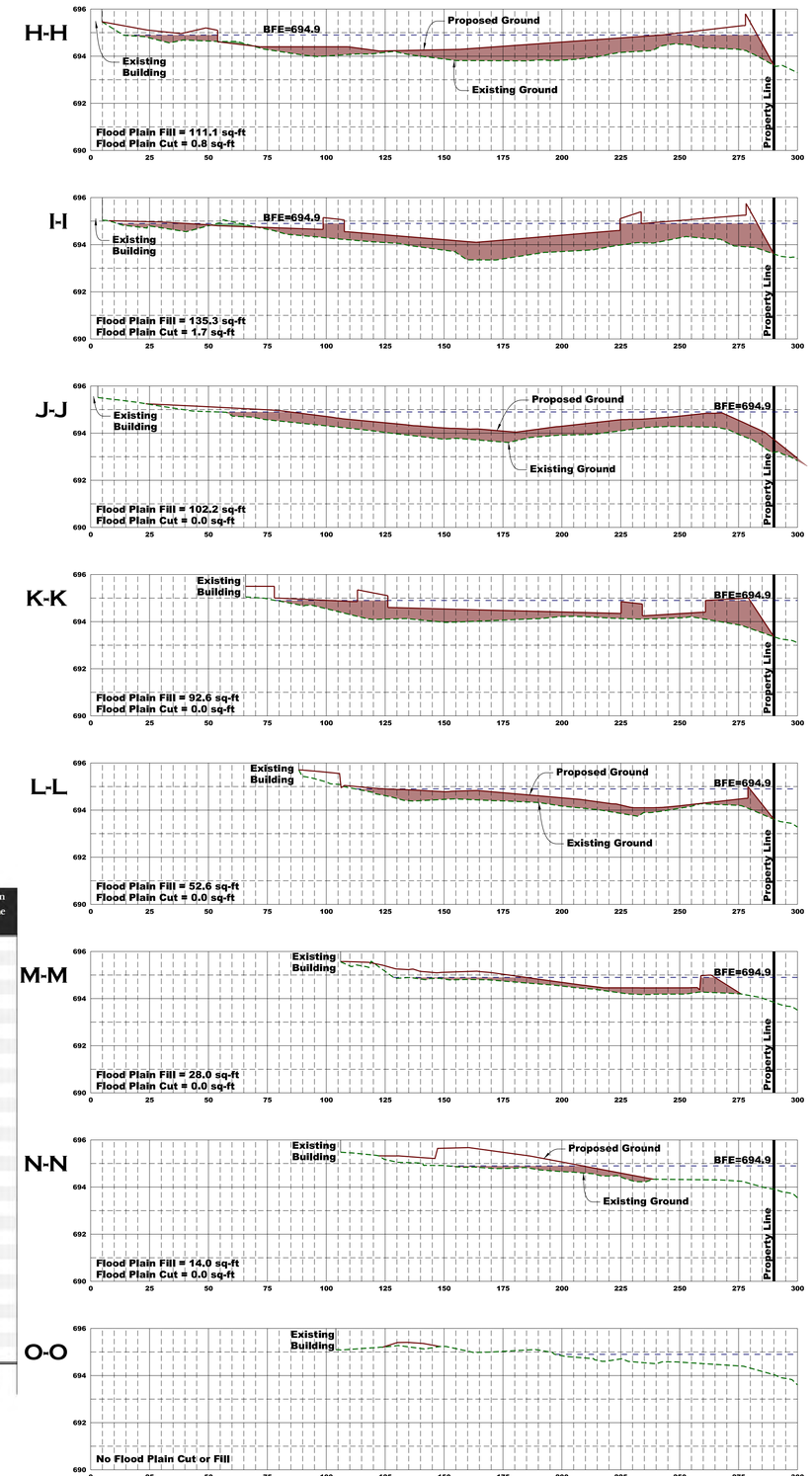
SHEET NAME

CROSS SECTIONS

SHEET #
C-6.1

DATE: 2/18/2015
FILE: E:\ACTIVE-PROJECTS\43307-313813-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: C-6.1





Flood Plain Cut/Fill Calculations

Section ID	Distance	Flood Plain Fill Area (ft^2)	Flood Plain Fill Volume (ft^3)	Flood Plain Cut Area (ft^2)	Flood Plain Cut Volume (ft^3)
A-A		0.0		0.0	
	10		144.5		49.5
B-B		28.9		9.9	
	10		399.5		127.5
C-C		51.0		15.6	
	10		642.5		264.5
D-D		77.5		37.3	
	15		1304.3		494.3
E-E		96.4		28.6	
	15		1557.0		294.0
F-F		111.2		10.6	
	10		1166.5		85.0
G-G		122.1		6.4	
	28.5		3323.1		102.6
H-H		111.1		0.8	
	30		3696.0		37.5
I-I		135.3		1.7	
	30		3562.5		25.5
J-J		102.2		0.0	
	30		2922.0		0.0
K-K		92.6		0.0	
	30		2178.0		0.0
L-L		52.6		0.0	
	30		1209.0		0.0
M-M		28.0		0.0	
	15		315.0		0.0
N-N		14.0		0.0	
	10		70.0		0.0
O-O		0.0		0.0	
TOTAL			**22489.9**		**1480.4**

Total Flood Plain Fill = 22,489.9 ft^3

Total Flood Plain Cut = 1,480.4 ft^3

Required Offsite Compensatory = **21,009.5 ft^3** = **0.482 ac-ft**

GRAPHIC SCALE - FEET

EDENBRIDGE APARTMENTS PARKING EXPANSION

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

WEBSTER, MCGRATH & AHLBERG, LTD.
WMA
LAND SURVEYING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE
Over 100 Years of Service to Clients
207 SOUTH NAPERVILLE ROAD, WHEATON, ILLINOIS 60187
PH: (630)668-7603 FAX: (630)682-1760
DESIGN FIRM LICENSE NO. 184003101

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-13-2014	Additional Topographic information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show snow storage locations	SMR

Section-Township-Range
Cook: SE¼ 31-36-13

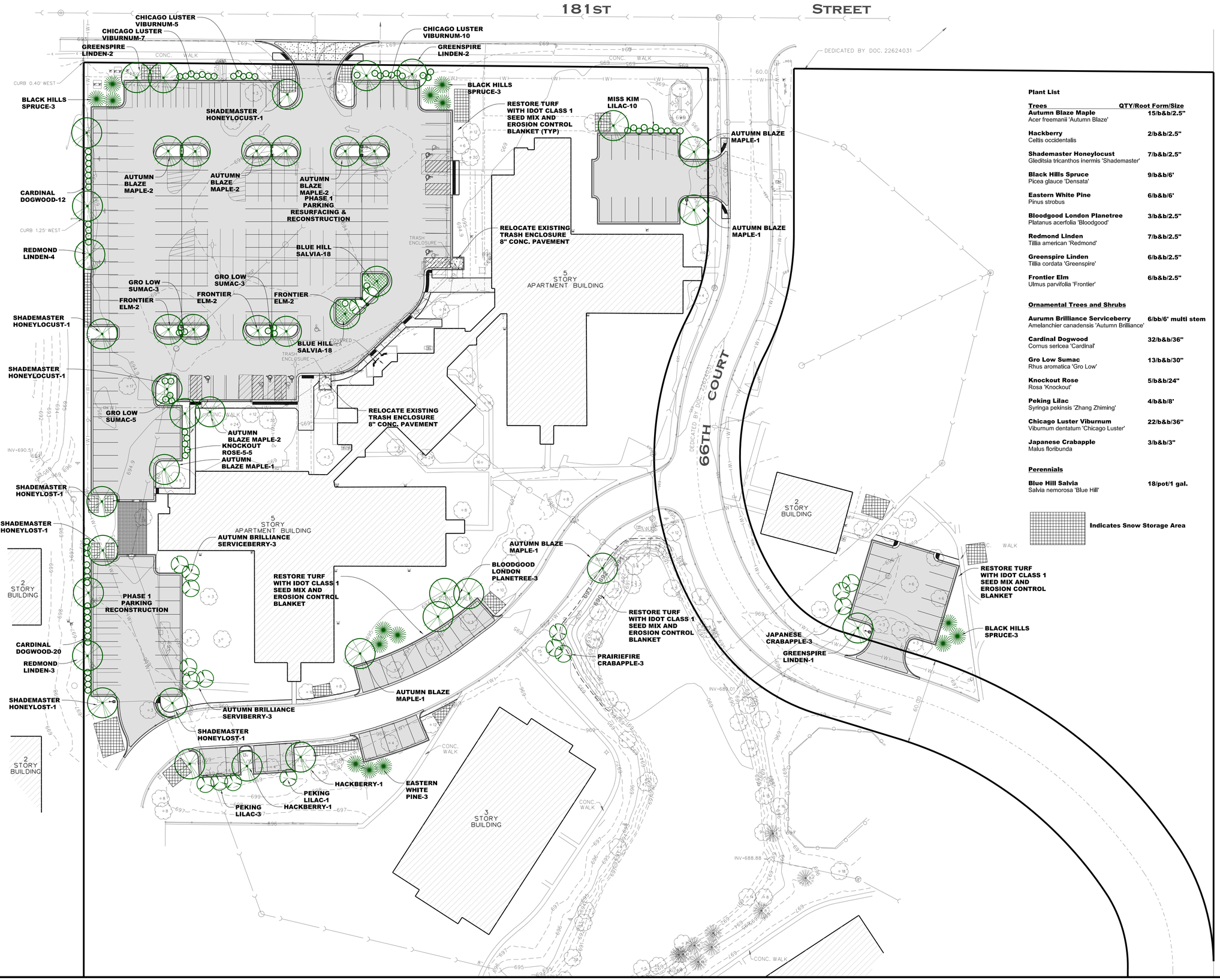
JOB # 43307	SURV: JCV
DRAWN: RLS	REVIEW: SMR
SCALE: 1"=30'	DATE: 05-12-2014

SHEET NAME

CROSS SECTIONS

SHEET # C-6.2

DATE: 2/18/2015
FILE: E:\ACTIVE-PROJECTS\43307-313613-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: C-6.2



Plant List

Trees	QTY/Root Form/Size
Autumn Blaze Maple Acer freemanii 'Autumn Blaze'	**15/b&b/2.5"**
Hackberry Celtis occidentalis	**2/b&b/2.5"**
Shademaster Honeylocust Gleditsia tricanthos inermis 'Shademaster'	**7/b&b/2.5"**
Black Hills Spruce Picea glauce 'Densata'	**9/b&b/6'**
Eastern White Pine Pinus strobus	**6/b&b/6'**
Bloodgood London Planetree Platanus acerfolia 'Bloodgood'	**3/b&b/2.5"**
Redmond Linden Tillia american 'Redmond'	**7/b&b/2.5"**
Greenspire Linden Tillia cordata 'Greenspire'	**6/b&b/2.5"**
Frontier Elm Ulmus parvifolia 'Frontier'	**6/b&b/2.5"**

Ornamental Trees and Shrubs

Aurumn Brilliance Serviceberry Amelanchier canadensis 'Autumn Brilliance'	**6/bb/6' multi stem**
Cardinal Dogwood Cornus sericea 'Cardinal'	**32/b&b/36"**
Gro Low Sumac Rhus aromatica 'Gro Low'	**13/b&b/30"**
Knockout Rose Rosa 'Knockout'	**5/b&b/24"**
Peking Lilac Syringa pekinsis 'Zhang Zhiming'	**4/b&b/8'**
Chicago Luster Viburnum Viburnum dentatum 'Chicago Luster'	**22/b&b/36"**
Japanese Crabapple Malus floribunda	**3/b&b/3"**

Perennials

Blue Hill Salvia Salvia nemorosa 'Blue Hill'	**18/pot/1 gal.**

Indicates Snow Storage Area

0 30 60
GRAPHIC SCALE - FEET

Edenbridge Apartments Parking Expansion

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

Webster, McGrath & Ahlberg, Ltd.
Land Surveying - Civil Engineering - Landscape Architecture
207 South Northwest Highway, Palatine, Illinois 60187
Phone (847) 358-0300 Fax (847) 358-0303
Design Firm License No. 184-003101
Over 100 Years of Service to Clients

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-15-2014	Additional Topographic Information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show snow storage locations	SMR

Section-Township-Range
Cook: SE¼ 31-36-13

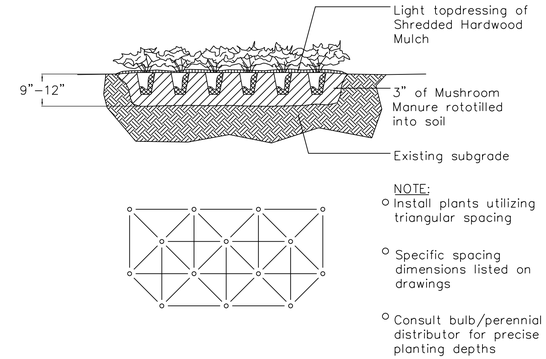
JOB # 43307	SURV: JCV
DRAWN: RLS	REVIEW: SMR
SCALE: 1"=30'	DATE: 05-12-2014

SHEET NAME

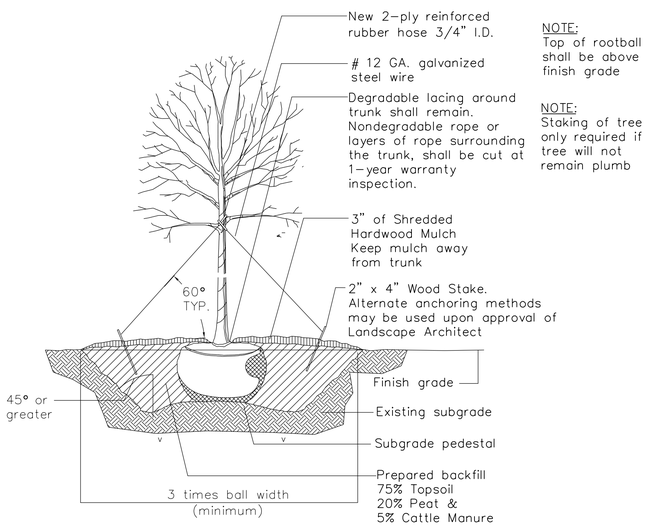
Landscape Plan

SHEET # **L-1**

DATE: 2/19/2015
FILE: E:\ACTIVE-PROJECTS\43307-313613-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: L-1



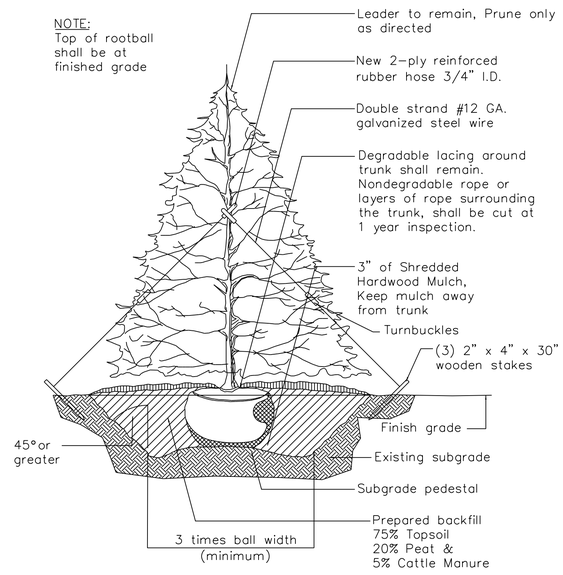
PERENNIAL, GROUNDCOVER, & ORNAMENTAL GRASS INSTALLATION DETAIL
N.T.S.



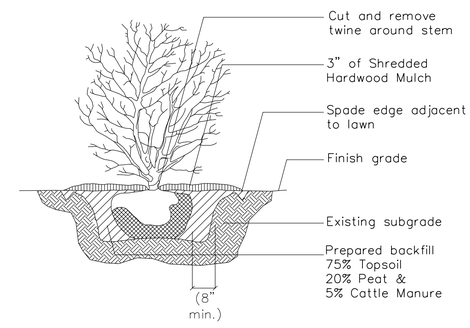
NOTE:
Top of rootball shall be above finish grade

NOTE:
Staking of tree only required if tree will not remain plumb

DECIDUOUS TREE INSTALLATION DETAIL
N.T.S.



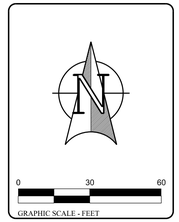
EVERGREEN TREE INSTALLATION DETAIL
N.T.S.



SHRUB INSTALLATION DETAIL
N.T.S.

GENERAL NOTES

1. Quantity lists are supplied as a convenience. The Contractor shall verify all quantities.
2. Landscape Contractor shall verify locations of all underground utilities prior to digging. Contact "J.U.L.I.E" (Joint Utility Locating for Excavators) 1–800–892–0123.
3. Planting beds shall be elevated slightly to provide for proper drainage. Rootballs of trees shall be elevated above finished grade as illustrated on installation details. All grading shall provide slopes which are smooth, continuous and have positive drainage in all areas. Should the Landscape Contractor encounter drainage problems which may be detrimental to the growth of the specified plant materials, the Owner shall be notified accordingly, prior to installation.
4. Plant material shall be nursery grown and be either ball and burlapped or container grown. Sizes indicated on plant list represent minimum requirements. The requirements for measurement, branching and ball size shall conform to the "American Standard for Nursery Stock" (latest edition) by the American Association of Nurserymen, Inc. Plant materials for groupings or where symmetry is critical, shall be matched as nearly as possible
5. Restore all disturbed area with 4" topsoil, Excelsior Blanket and Seed with IDOT Class 1 Seed Mix



EDENBRIDGE APARTMENTS PARKING EXPANSION

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

WEBSTER, MCGRATH & AHLBERG, LTD.
WMA
LAND SURVEYING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE
Over 100 Years of Service to Clients
207 SOUTH NAPERVILLE ROAD, WHEATON, ILLINOIS 60187
PH: (630)668-7603 FAX: (630)682-1760
DESIGN FIRM LICENSE NO. 184-003101

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-13-2014	Additional Topographic Information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show snow storage locations	SMR

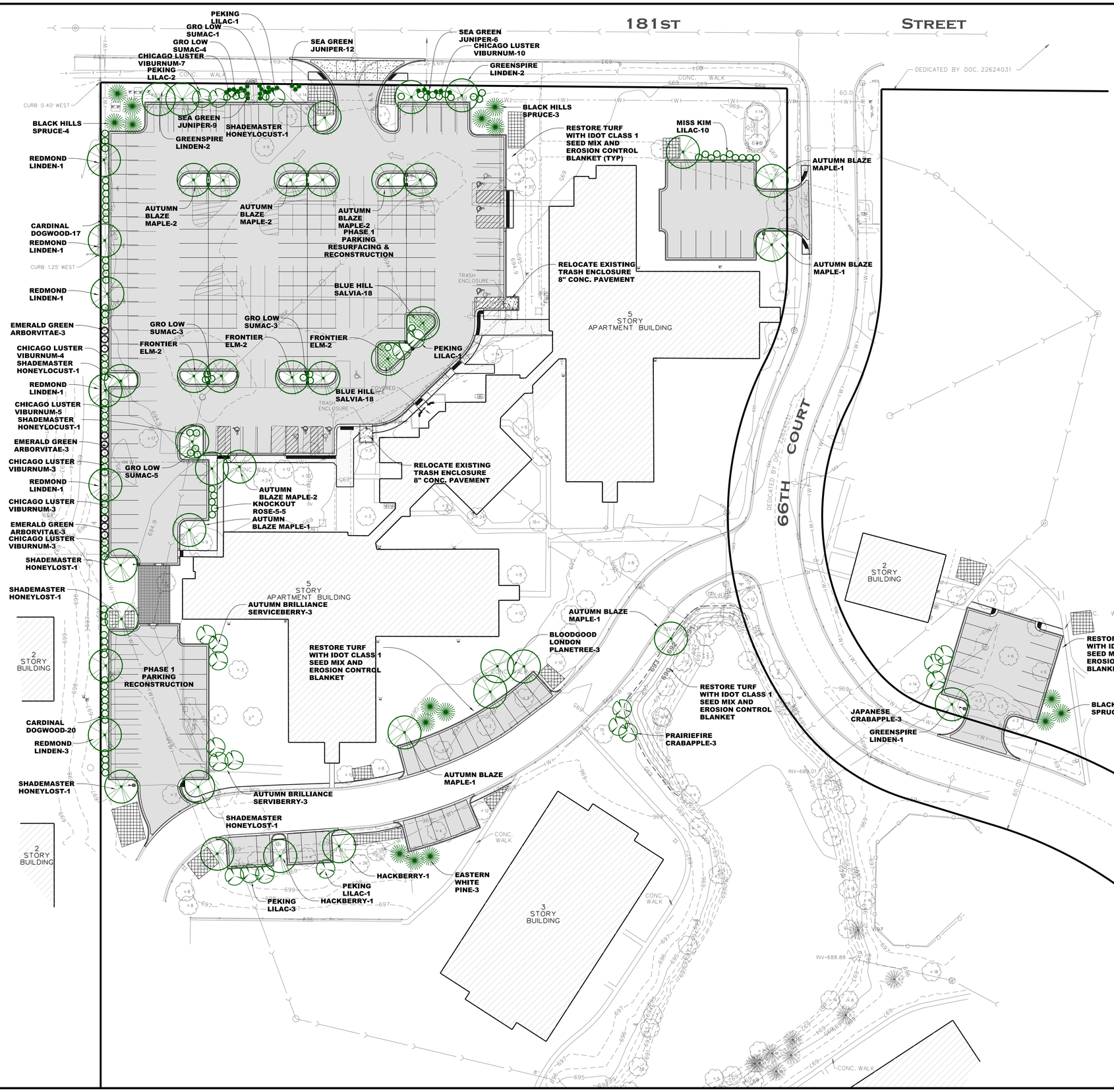
Section-Township-Range
Cook: SE¼ 31-36-13

JOB # 43307	SURV: JCV
DRAWN: RLS	REVIEW: SMR
SCALE: 1"=30'	DATE: 05-12-2014

SHEET NAME
LANDSCAPE DETAILS

SHEET #
L-2

DATE: 2/18/2015
FILE: E:\ACTIVE-PROJECTS\43307-313613-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: L-2



Plant List

Trees	QTY/Root Form/Size
Autumn Blaze Maple Acer freemanii 'Autumn Blaze'	**15/b&b/2.5"**
Hackberry Celtis occidentalis	**2/b&b/2.5"**
Shademaster Honeylocust Gleditsia tricanthos inermis 'Shademaster'	**7/b&b/2.5"**
Black Hills Spruce Picea glauce 'Densata'	**10/b&b/6'**
Eastern White Pine Pinus strobus	**6/b&b/6'**
Bloodgood London Planetree Platanus acerfolia 'Bloodgood'	**3/b&b/2.5"**
Redmond Linden Tillia american 'Redmond'	**8/b&b/2.5"**
Greenspire Linden Tillia cordata 'Greenspire'	**6/b&b/2.5"**
Frontier Elm Ulmus parvifolia 'Frontier'	**6/b&b/2.5"**
Ornamental Trees and Shrubs	
Aurumn Brilliance Serviceberry Amelanchier canadensis 'Autumn Brilliance'	**6/bb/6' multi stem**
Cardinal Dogwood Cornus sericea 'Cardinal'	**37/b&b/36"**
Sea Green Juniper Juniperus chinensis 'Sea Green'	**27/cont./3 gal.**
Gro Low Sumac Rhus aromatica 'Gro Low'	**18/b&b/30"**
Knockout Rose Rosa 'Knockout'	**5/b&b/24"**
Peking Lilac Syringa pekinsis 'Zhang Zhiming'	**9/b&b/8'**
Emerald Green Arborvitae Thuja occidentalis 'Smargard'	**9/b&b/6'**
Chicago Luster Viburnum Viburnum dentatum 'Chicago Luster'	**25/b&b/36"**
Japanese Crabapple Malus floribunda	**3/b&b/3"**
Perennials	
Blue Hill Salvia Salvia nemorosa 'Blue Hill'	**18/pot/1 gal.**

0 30 60
GRAPHIC SCALE - FEET

Edenbridge Apartments Parking Expansion

Prepared For:
A&R Katz Management, Inc.
3175 Commercial Ave, Suite 100
Northbrook, IL 60062
847-205-1200

Webster, McGrath & Ahlberg, Ltd.
WMA
Land Surveying - Civil Engineering - Landscape Architecture
Over 100 Years of Service to Clients
207 South Northwest Highway, Wheaton, Illinois 60187
Phone 630-668-7197 Fax 630-668-7198
Design Firm License No. 184003101

REV#	DATE	REVISION DESCRIPTION	BY
1	07-21-2014	Revised per Robinson Engineering review	RLS
2	08-13-2014	Additional Topographic Information	RLS
3	01-15-2015	Revised per parking stall dimension requirements	RLS
4	02-18-2015	Add Grasscrete and show snow storage locations	SMR
5	02-25-2015	Add Landscape Material on 181st and west yard	

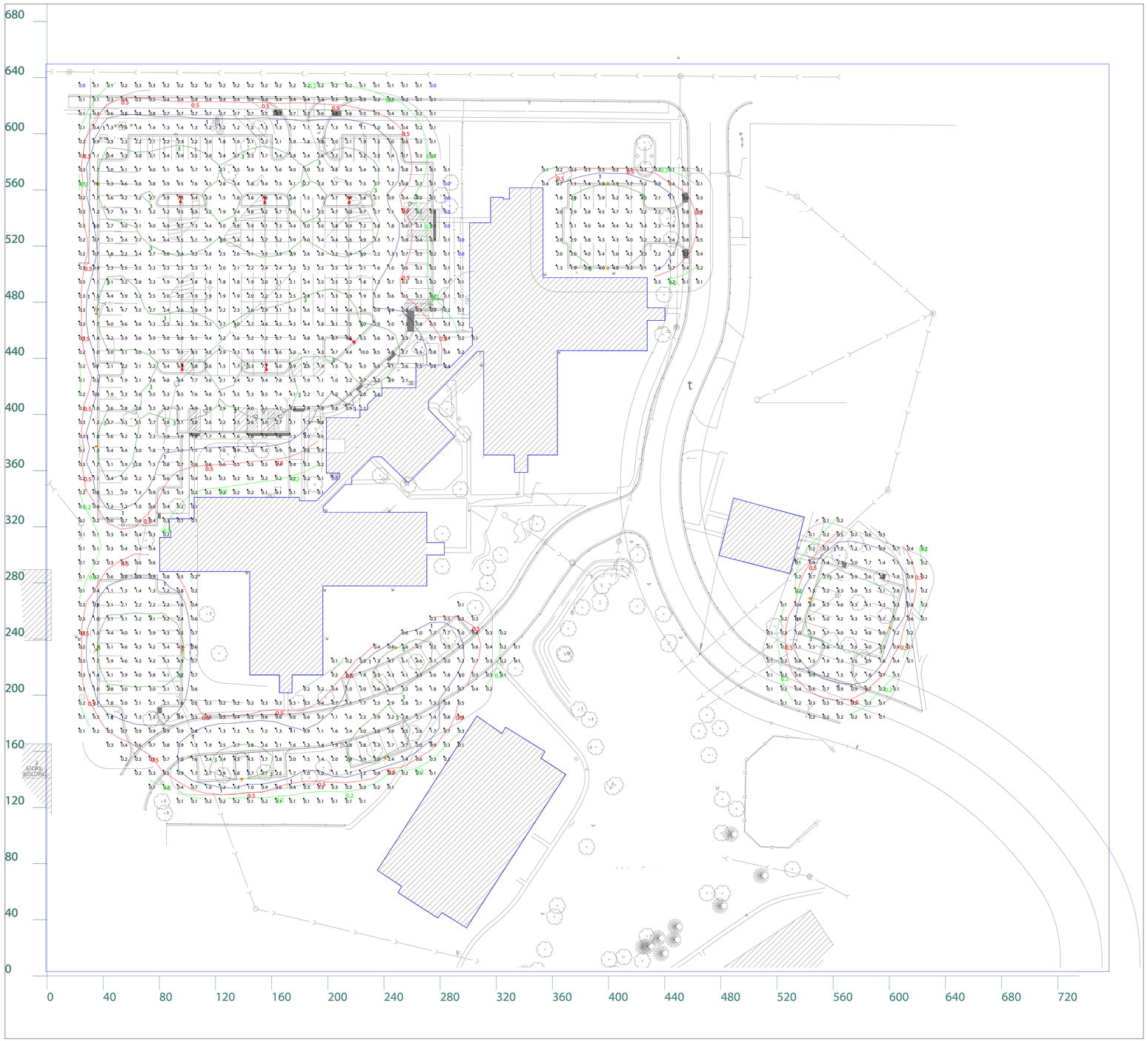
Section-Township-Range
Cook: SE¼ 31-36-13

JOB # 43307 SURV: JCV
DRAWN: RLS REVIEW: SMR
SCALE: 1"=30' DATE: 05-12-2014

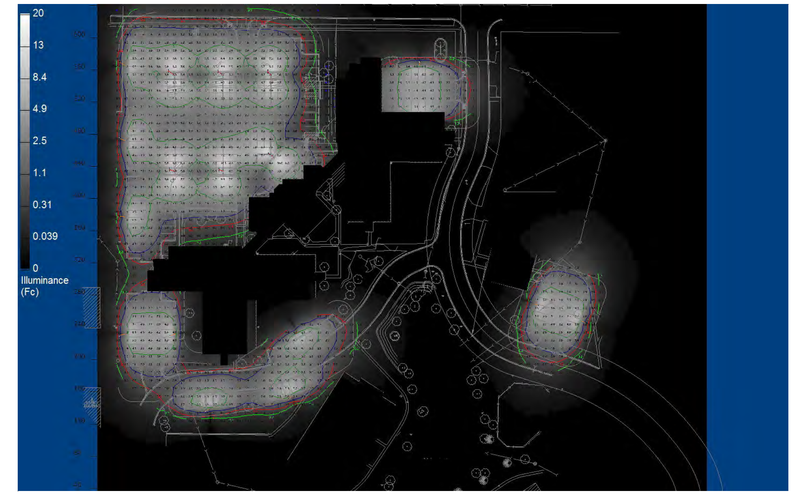
SHEET NAME
Landscape Plan

SHEET # L-1

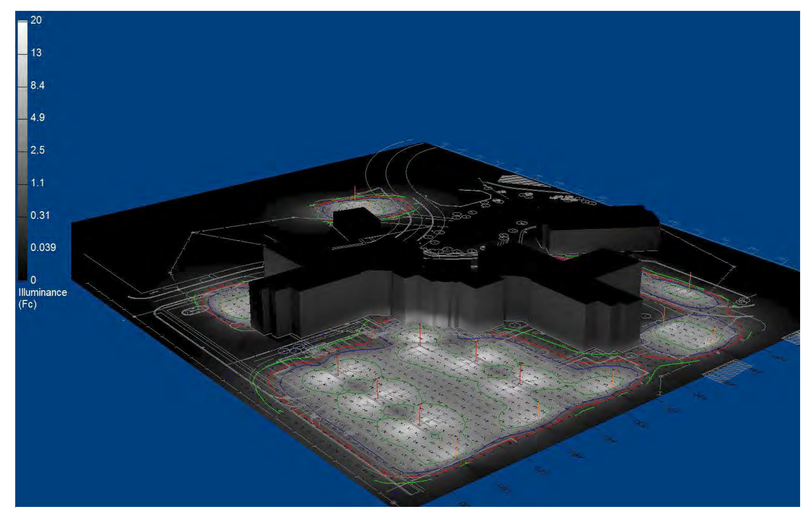
DATE: 2/25/2015
FILE: E:\ACTIVE-PROJECTS\43307-313813-Cook\ENGR-MR\43307-FinalEngr.dgn
MODEL: L-1



Scale: 1 inch= 40 Ft.



Plan View



Isometric View

The Lighting Analysis, eLayout, Energy Analysis and/or Visual Simulation ("Lighting Design") provided by the RAB Lighting Inc. ("RAB") represent an anticipated production lighting design based on information provided by others. Dimensions and data supplied by others. These design parameters and information provided by others have not been field verified by RAB and therefore actual measured results may vary from the Lighting Design. Any modifications made to the design prepared by and for RAB information be field verified to reduce variation.
RAB neither warranties, either implied or stated with regard to actual measured light levels, energy consumption or other results that may differ from the Lighting Design. RAB neither warranties, either implied or stated, nor represents the appropriateness, completeness, or accuracy of the Lighting Design as compliant with any applicable regulations, requirements with the exception of those specifically stated on drawings created and submitted by RAB. The Lighting design isssued, in whole or in part, by RAB is not to be used for construction purposes unless it is intended for construction nor as being part of a project's construction documentation package.

Scale: as noted

Date:2/17/2015

Drawn By:S Elliott

Job Name:
Edenbridge Apts
Northbrook, IL
Lighting Layout
Version A

Prepared For:
Agents Midwest LTD
775 Mittel Dr
Wood Dale IL

RAB Lighting
170 Ludlow Avenue
Northvale, NJ 07647

Tel: (888) 722-1000
Fax: (888) 722-1232
WWW.RABWEB.COM

File: \\RAB-STORAGE-1\Docs\Sales\Applications Engineering\Job Files\U\United Electric Sales\Graybar\Orlando 100810\Disney Textile Services

Luminaire Schedule											
Symbol	Qty	Label	Arrangement	Lum. Lumens	LLF	Description	Lum. Watts	Arr. Watts	Total Watts	Filename	Tag
	6	ALED4T125 2 @ 180°	BACK-BACK	12805	1.000	Area Light LED 125w	136.3	272.6	1635.6	ALED4T125 - Cool - ITL80134.IES	A2
	12	ALED3T125	SINGLE	10893	1.000	Area Light LED 125w	134.4	134.4	1612.8	ALED3T125 - Cool - ITL80128.IES	B

Calculation Summary										
Label	Description	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	PtSpcLr	PtSpcTb
Calc Pts Ground_Planar	Readings Taken at 0'-0"AFG	Illuminance	Fc	2.05	10.1	0.0	N.A.	N.A.	10	10

Luminaire Location Summary						
LumNo	Label	X	Y	Mtg Ht	Orient	Tag (Qty)
1	ALED4T125 2 @ 180°	95	553.25	20	90	A2 (2)
2	ALED4T125 2 @ 180°	155	552.75	20	90	A2 (2)
3	ALED4T125 2 @ 180°	215.25	552.75	20	90	A2 (2)
4	ALED4T125 2 @ 180°	96.25	433.75	20	90	A2 (2)
5	ALED4T125 2 @ 180°	156.25	433.75	20	90	A2 (2)
6	ALED4T125 2 @ 180°	217.25	452.75	20	324.462	A2 (2)
7	ALED3T125	34.5	232.25	20	0	B (1)
8	ALED3T125	543	269.25	20	341.125	B (1)
9	ALED3T125	399.5	503.5	20	90	B (1)
10	ALED3T125	97	232.25	20	180	B (1)
11	ALED3T125	34.5	377.25	20	0	B (1)
12	ALED3T125	34.5	471.75	20	0	B (1)
13	ALED3T125	34.5	564.75	20	0	B (1)
14	ALED3T125	399.5	565.25	20	270	B (1)
15	ALED3T125	138.75	139.5	20	94.343	B (1)
16	ALED3T125	241	154.75	20	111.466	B (1)
17	ALED3T125	248	234.5	20	301.293	B (1)
18	ALED3T125	601.25	247.75	20	159.963	B (1)
Total Quantity: 18						

A : ALED4T125

B : ALED3T125

NOTES:

* CALCULATED VALUES DO NOT INCLUDE CONTRIBUTIONS FROM EXISTING LIGHT SOURCES

* The light loss factor (LLF) is a product of many variables, only lamp lumen depreciation (LLD) has been applied to the calculated results unless otherwise noted. The LLD is the result (quotient) of mean lumens / initial lumens per lamp manufacturers' specifications.

* Illumination values shown (in footcandles) are the predicted results for planes of calculation either horizontal, vertical or inclined as designated in the calculation summary. Meter orientation is normal to the plane of calculation.

* The calculated results of this lighting simulation represent an anticipated prediction of system performance. Actual measured results may vary from the anticipated performance and are subject to means and methods which are beyond the control of RAB Lighting, Inc.

* Mounting height determination is job site specific, our lighting simulations assume a mounting height (insertion point of the luminaire symbol) to be taken at the top of the symbol for ceiling mounted luminaires and at the bottom of the symbol for all other luminaire mounting configurations.

* RAB Lighting, Inc. luminaire and product designs are protected under U.S. and International intellectual property laws. Patents issued or pending apply.

The Lighting Analysis, Layout, Energy Analysis and/or Visual Simulation ("Lighting Design") provided by the RAB Lighting Inc. ("RAB") represent an anticipated prediction of lighting system performance based upon design parameters and information supplied by others. The Lighting Design is provided by RAB as a service to others have not been field verified by RAB and therefore actual measured results may vary from the actual field conditions. RAB recommends that design parameters and other information be field verified to avoid variances. RAB neither warrants, either implied or stated with regard to actual measured light levels or energy consumption levels as compared to those illustrated by the Lighting Design. RAB makes no warranties, either implied or stated with regard to the suitability, appropriateness, completeness or suitability of the Lighting Design intent as compliant with any applicable regulatory code requirements with the exception of those specifically stated in writing. Lighting Design drawings, layouts, renderings, light levels, or photometrics are as advisory documents for informational purposes and is not intended for construction nor as being part of a project's construction documentation package.

Scale: as noted

Date:2/17/2015

Drawn By:S Elliott

Job Name:
Edenbridge Apts
Northbrook, IL
Lighting Layout
Version A

Prepared For:
Agents Midwest LTD
775 Mittel Dr
Wood Dale IL

RAB Lighting
170 Ludlow Avenue
Northvale, NJ 07647

Tel: (888) 722-1000
Fax: (888) 722-1232
WWW.RABWEB.COM

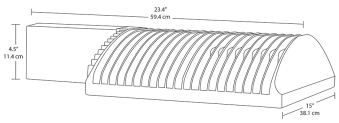
File: \\RAB-STORAGE-1\Docs\Sales\Applications Engineering\Job Files\U\United Electric Sales\Graybar\Orlando 100810\Disney Textile Services

ALED4T125

Specification grade area lights available in IES Type IV distributions. Suited for mounting on the sides of buildings and walls, and for illuminating the perimeter of parking areas. Replaces up to 400W metal halide. Patent pending management system. 5 Year Warranty.

Color: Bronze

Weight: 32.0 lbs



LED Info

Watts:	125W
Color Temp:	5000K (Cool)
Color Accuracy:	65
L70 Lifespan:	100000
LM79 Lumens:	12805
Efficacy:	94 LPW

Driver Info

Type:	Constant Current
120V:	1.12A
208V:	0.70A
240V:	0.61A
277V:	0.52A
Input Watts:	136W
Efficiency:	92%

Technical Specifications

UL Listing:
Suitable for wet locations.

Lifespan:
100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

IES Classification:
The Type IV distribution (also known as a Forward Throw) is especially suited for mounting on the sides of buildings and walls, and for illuminating the perimeter of parking areas. It produces a semiCircular distribution with essentially the same candlepower at lateral angles from 90° to 270°.

Effective Projected Area:
EPA = 0.75

LEDs:
Multi-chip, high-output, long-life LEDs

Drivers:
Two Drivers, Constant Current, Class 2, 1750mA, 100-277V, 50/60Hz, 1.1A, Power Factor 99%

THD:
5.3% at 120V, 15.4% at 277V

Ambient Temperature:
Suitable for use in 40°C (104°F) ambient temperatures.

Surge Protection:
4kV

Cold Weather Starting:
The minimum starting temperature is -40°F/-40°C.

Thermal Management:
Superior thermal management with external Air-Flow fins.

Housing:
Die-cast aluminum housing, lens frame and mounting arm.

Mounting:
Heavy-duty mounting arm with "O" ring seal & stainless steel screws

Color Stability:
LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

Color Uniformity:
RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2011.

Reflector:
Specular vacuum-metallized polycarbonate

Gaskets:
High-temperature silicone gaskets

Finish:
Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contains no VOC or toxic heavy metals.

Green Technology:
Mercury and UV free, and RoHS compliant. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

IESNA LM-79 & LM-80 Testing:
RAB LED luminaries have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have been received the Department of Energy "Lighting Facts" label.

Copyright ©2015 RAB Lighting Inc. All Rights Reserved

DLC Listed:
This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities.

Replacement:
The ALED125 replaces 320W Metal Halide Area Lights.

California Title 24:
See ALED4T125/D10, ALED4T125/BL, ALED3T125/PCS, ALED4T125/PCS2, or ALED4T125/PCT for a 2013 California Title 24 compliant product.

Dark Sky Approved:
The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

For use on LEED Buildings:
IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.

Warranty:
RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

Country of Origin:
Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.

Buy American Act Compliant:
This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act.

Recovery Act (ARRA) Compliant:
This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods--Buy American Act-- Construction Materials (October 2010).

Trade Agreements Act Compliant:
This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

GSA Schedule:
Suitable in accordance with FAR Subpart 25.4.

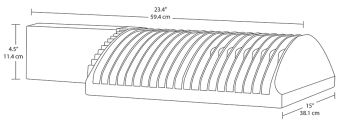
Copyright ©2015 RAB Lighting Inc. All Rights Reserved

ALED3T125

Specification grade area lights available in IES Type III distributions. For use for roadway, general parking and other area lighting applications where a larger pool of lighting is required. Replaces up to 400W metal halide. Patent pending thermal management system. 5 Year Warranty.

Color: Bronze

Weight: 32.0 lbs



LED Info

Watts:	125W
Color Temp:	5000K (Cool)
Color Accuracy:	65
L70 Lifespan:	100000
LM79 Lumens:	10893
Efficacy:	81 LPW

Driver Info

Type:	Constant Current
120V:	1.12A
208V:	0.70A
240V:	0.61A
277V:	0.52A
Input Watts:	134W
Efficiency:	93%

Technical Specifications

UL Listing:
Suitable for wet locations.

Lifespan:
100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

IES Classification:
The Type III distribution is ideal for roadway, general parking and other area lighting applications where a larger pool of lighting is required. It is intended to be located near the side of the area, allowing the light to project outward and fill the area.

Effective Projected Area:
EPA = 0.75

LEDs:
Multi-chip, high-output, long-life LEDs

Drivers:
Two Drivers, Constant Current, Class 2, 1750mA, 100-277V, 50/60Hz, 1.1A, Power Factor 99%

THD:
5.5% at 120V, 15.6% at 277V

Ambient Temperature:
Suitable for use in 40°C (104°F) ambient temperatures.

Surge Protection:
4kV

Cold Weather Starting:
The minimum starting temperature is -40°F/-40°C.

Thermal Management:
Superior thermal management with external Air-Flow fins.

Housing:
Die-cast aluminum housing, lens frame and mounting arm.

Mounting:
Heavy-duty mounting arm with "O" ring seal & stainless steel screws

Color Stability:
LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

Color Uniformity:
RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2011.

Reflector:
Specular vacuum-metallized polycarbonate

Gaskets:
High-temperature silicone gaskets

Finish:
Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contains no VOC or toxic heavy metals.

Green Technology:
Mercury and UV free, and RoHS compliant. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

IESNA LM-79 & LM-80 Testing:
RAB LED luminaries have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have been received the Department of Energy "Lighting Facts" label.

Copyright ©2015 RAB Lighting Inc. All Rights Reserved

DLC Listed:
This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities.

Replacement:
The ALED125 replaces 320W Metal Halide Area Lights.

California Title 24:
See ALED3T125/D10, ALED3T125/BL, ALED3T125/PCS, ALED3T125/PCS2, or ALED3T125/PCT for a 2013 California Title 24 compliant product.

Dark Sky Approved:
The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

For use on LEED Buildings:
IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.

Warranty:
RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

Country of Origin:
Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.

Buy American Act Compliant:
This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act.

Recovery Act (ARRA) Compliant:
This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods--Buy American Act-- Construction Materials (October 2010).

Trade Agreements Act Compliant:
This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

GSA Schedule:
Suitable in accordance with FAR Subpart 25.4.

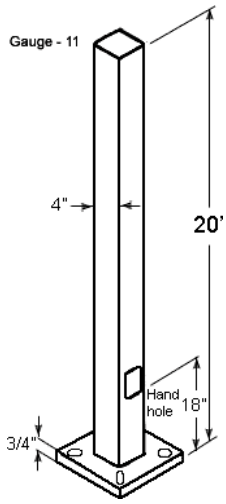
Copyright ©2015 RAB Lighting Inc. All Rights Reserved

PS4-11-20D2

Square steel poles drilled for 2 Area Lights at 180°. Designed for ground mounting. Poles are stocked nationwide for quick shipment. Protective packaging ensures poles arrive at the job site good as new.

Color: Bronze

Weight: 137.0 lbs



Lamp Info

Type:	N/A
Watts:	N/A
Shape/Size:	N/A
Base:	N/A
ANSI:	N/A
Hours:	N/A
Lamp Lumens:	N/A
Efficacy:	N/A

Ballast Info

Type:	N/A
120V:	N/A
208V:	N/A
240V:	N/A
277V:	N/A
Input Watts:	N/A
Efficiency:	N/A

Technical Specifications

CSA Listed:
Suitable for wet locations.

Shaft:
46,000 p.s.i. minimum yield.

Hand Holes:
Reinforced with grounding lug and removable cover.

Base Plates:
Slotted base plates 36,000 p.s.i.

Shipping Protection:
All poles are shipped in individual corrugated cartons to prevent finish damage.

Color:
Bronze powder coating.

Terms of Sale:
Pole Terms of Sale is available .

Height:
20 FT.

Weight:
137 lbs.

Gauge:
11

Wall Thickness:
1/8".

Shaft Size:
4".

Hand Hole Dimensions:
3" x 5".

Bolt Circle:
8 1/2".

Base Dimension:
8".

Anchor Bolt:
Galvanized anchor bolts and galvanized hardware and anchor bolt template. All bolts have a 3" hook.

Anchor Bolt Templates:
WARNING Template must be printed on 11" x 17" sheet for actual size. CHECK SCALE BEFORE USING. Templates shipped with anchor bolts and available .

Pre-Shipped Anchor Bolts:
Bolts can be pre-shipped upon request for additional freight charge.

MaxEPA's/Max Weights:
70MPH 8.3 ft_/240 lb
80MPH 5.6 ft_/165 lb
90MPH 3.6 ft_/110 lb
100MPH 2.2 ft_/75 lb
110MPH 1.0 ft_/45 lb
120MPH 0.2 ft_/20 lb.

Copyright ©2015 RAB Lighting Inc. All Rights Reserved