

Applicant

Greg Seifert Geis Companies

Property Location

17231 LaGrange Road

Parcel Size

3.89 acres (Parcel 1: 3.11 acres; Parcel 2: .78 acres)

Zoning

Parcel 1:B-3
Parcel 2:R-5 PUD
(Caledonia Townhomes)

Approval Sought

Site Plan Approval

Requested Action

Assign two Commissioners to meet with the Applicant in a Work Session.

Project Planner

Paula J. Wallrich, AICP Deputy Planning Director

PLAN COMMISSION STAFF REPORT

MAY 7, 2015

THE GREAT ESCAPE 17231 La Grange Road



EXECUTIVE SUMMARY

The Applicant, Greg Seifert, on behalf of the owner of *The Great Escape*- Mr. Barry Poll, seeks an approval for the proposed Site Plan. The Applicant proposes to construct a 40,070 SF structure which will include a 34,495 SF retail building and a 5,575 SF warehouse.

The Applicant has worked cooperatively with Staff, resolving several issue during the review process. The development meets B-3 zoning requirements; no variances are required. The proposed building meets the Village's masonry requirement with 62% of the façade as brick (requirement is 60%).

The property owner purchased two parcels for this development. The development will occur entirely on Parcel 1; Parcel 2 is part of the Calendonia Townhome PUD. Development of Parcel 2 will require rezoning and a Substantial Deviation of the approved PUD.

The Applicant has scheduled a meeting with the homeowners of the Caledonia Townhome Association for May 4th to present the proposed plans; Staff will attend and summarize the meeting at the May 7th Plan Commission meeting.

Great Escape received a "performance-based sales tax incentive" approved by the Village Board earlier this year.

SUMMARY OF OPEN ITEMS

OPEN ITEM	SUGGESTED RESOLUTION
1. Areas of the access drive aisle are proposed without curbs.	Improve with curb.
2. Right-in/Right-out cross section indicates a striped median.	Improve with a 2" mountable median.

EXISTING SITE

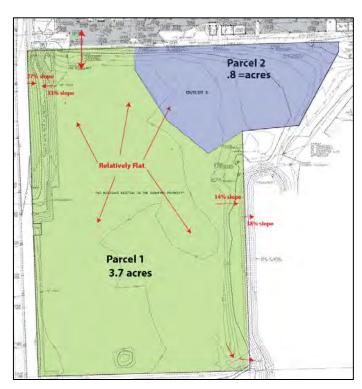




The subject property is an undeveloped 3.89 acre parcel on LaGrange Road south of 171st Street. Existing commercial uses border the property on the north, Cook County Forest Preserve is across La Grange Road to the west, the Caledonia Townhome PUD is to the east and medical commercial (Alpha Med) is to the south.

The Applicant's property is comprised of two parcels: Parcel 1 is 3.7 acres and Parcel 2 comprises .8 ac., which is part of the Caledonia PUD. Parcel 1 is relatively flat with a ditch running in a north–south direction in the northwest corner of the parcel, adjacent to the LaGrange Road ROW. The side slopes of the ditch are steep at 27-33% slopes. The property falls five feet (5') along its east border and drains to the east at the southeast corner of the property where rip rap has been installed to mitigate the impact of the runoff. The slopes are significant here as well with a 14% slope on Parcel 1 sloping to 38% slopes for the detention pond on the adjacent property to the east.

Parcel 2 was platted with a conservation easement as part of the Caledonia PUD. There is a wetland identified on the National Wetland Inventory Map. Village engineers are reviewing the delineation report to determine if there is development potential for this parcel. The Applicant has stated that they are hoping to develop additional retail on



Parcel 2 in the future; it is not part of the current review. Storm water detention has been provided with a previous development.

PROPOSED USE & COMPLIANCE WITH THE COMPREHENSIVE PLAN

The Applicant proposes to construct a new 34,495 SF retail store for *The Great Escape*; currently they operate two other stores both on 159th Street. One is located in Orland Park and the other in Tinley Park (limited to pool sales/supplies). Representatives from *The Great Escape* state that the Tinley Park store will be closed; no information has been provided on the Orland Park store. The new store will include a 5,575 SF warehouse as well. Representatives from *The Great Escape* note that the store has grown from a one-man company in 1971, selling pool supplies door-to-door, to the largest home leisure retailer in the Midwest.

The Village of Tinley Park Comprehensive Plan (2000) identifies this site as commercial; therefore, the proposed development is in accord with the Village's Comprehensive Plan.

ZONING & NEARBY LAND USES

Parcel 1 is zoned B-3; Parcel 2 is zoned R-5 PUD. The proposed development involves only Parcel 1. The following table outlines the bulk regulations for the B-3 District. The proposed structure on Parcel 1 meets the requirements established for the B-3 District; no variations are required.

VILLAGE REGULATION	DIMENSION	PETITIONER'S
B-3	REQUIRED	DIMENSION
Front Yard Setback	25'	90'
Side Yard(s) Setback	0	59'
Rear Yard Setback	25'	46.7'
Maximum Building Height	Three stories;	26'6"
	35 feet	
Lot Area Minimum	7,500 SF	161,171 SF
Lot Width Minimum	60 feet	484'
Lot Depth	125'	315'
Maximum Lot Coverage	50%	30% of Parcel1;
		25%/total property



GENERAL SITE PLAN REVIEW

The Applicant has exceeded the setbacks of the B-3 Zoning District. The relationship of parking fields to the structure is consistent with commercial properties in the area with parking in front of the building. The proposed retail store is located at the south end of the parcel; the Applicant hopes to develop additional retail on the northern portion of the property in the future.

Cross access will be provided along the north and south property lines; a plat of Easement has been provided. The Applicant will connect with the access aisle from the Charter Bank at the north property line; the south will be improved up to the property line. A landscape buffer will be planted at the south edge of the cross access easement per Staff's request.

Parking: The required parking for the proposed uses are:

Proposed Use	Village Code	Spaces Required	Spaces Provided
Furniture / Retail	1 per 600 SF	58 (34,495*/600)	58
Warehouse	1 per 2 employees + 1 per business vehicle	2 employees in the warehouse; no vehicles	2
Total		60	60

The Applicant has provided adequate parking for the proposed uses. The Applicant revised earlier proposals to meet the 26' wide aisle width. A sidewalk has been provided along the frontage of the property with a connection to the retail store.

LANDSCAPE ARCHITECTURE

The intent of the Village's Landscape Ordinance is to utilize landscape materials to enhance proposed development, soften the impact of parking areas, provide a buffer between land uses, and create an overall quality aesthetic for the site. Per Village Landscape Ordinance Section 158.20, at least 15% of the parking lot shall be covered with landscaping; the Applicant has provided 17.72% of the parking lot in landscaping exclusive of required bufferyard and foundation plantings.

There is a significant amount of road and landscape improvements that will result from IDOT's widening of LaGrange Road. The Applicant has reflected these improvements/plantings on their landscape plan (L1.1); the proposed landscape plan has been reviewed inclusive of IDOT's proposed improvements.

The Applicant has worked cooperatively with Staff in meeting or exceeding bufferyard requirements, parking lot screening and diversity in plant choices, including an increase in evergreen material. With respect to foundation plantings the Landscape Ordinance requires a minimum ten foot (10') wide landscaped area fronting not less than seventy percent (70%) of the side of all buildings which front dedicated streets or major interior access lanes. The Applicant has revised their earlier proposal to increase the amount of foundation landscaping and has proposed approximately 62% of the length of the building frontage with at least a 10' landscape bed. In two areas, measuring over 47' along the foundation, the Applicant has increased the width of the landscape bed beyond the 10' requirement to over 20' in areas. Requiring additional foundation plantings would compromise the pedestrian circulation of the site. It is Staff's opinion that the project meets the integrity of the Landscape Ordinance with respect to required foundation plantings.

LIGHTING

Village ordinance requires photometric readings of 0.5 foot candles or less at all property lines; the proposed plan meets Village ordinance. There are no pole lights proposed for the parking lot; all lighting will be mounted on the building. There are nine (9) wall sconces (depicted on the right) that will have full cutoffs, thus eliminating any off-site glare. There are three recessed can lights proposed in the canopy at the entrance. The Applicant is open to putting the rear lights on a timer; Staff will discuss this issue at the Homeowners meeting.



The proposed structure is a large masonry building with over 247' LF of frontage on LaGrange Road. The Architect has utilized the corner tower elements and central entry to break up the mass of the building. The Applicant has been very cooperative with Staff in addressing concerns regarding building material, reduction of EFIS material, building articulation and glazing. The building meets the masonry requirement of the Building Code which requires 60% brick; the proposed architecture provides 62% of the building materials as brick. The tower elements are provided as full parapets.

The front (west) façade is comprised almost entirely of brick (92%), with split face veneer and limestone columns flanking the entrance. Per Staff's request the Architect has reduced the amount of EFIS and increased the amount of brick in this location. The side elevations also include a significant amount of brick (71% & 76%) with the brick water table continuing along the same horizontal band as the front façade, and introduces the split face veneer for the top 5.5' to match the same banding as the front façade. The split face veneer will match the color of the EFIS on the front facade. The rear façade continues this same color banding with the brick water table at the bottom of the elevation and the split face veneer at the top of the elevation. The middle area will be colored to match the brick color on the side elevations but will be comprised of a split face veneer. The appearance will be consistent with the looks of the side elevations.

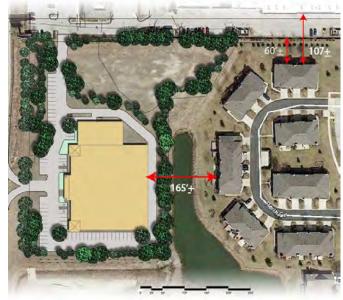
The Applicant has revised earlier proposals for Spandrel glass and is now providing true window glazing on both tower elements and all windows on the south elevation. The three windows on either side of the entry way are proposed for Spandrel glass, however only the bottom half of the window will be visible. These areas are used for display within the building. The shading from the awnings will limit the ability to determine the type of glazing on these windows.



Roof top HVAC units are proposed at five feet (5') in height. They are located 50' from the east and west edges of the building and approximately 30' from the north end of the building and 39' from the south end

of the building. . A line of sight study has been provided per Staff request which indicates that the units are not visible from within 1,330' of the west (or front) of the building, from within 135' from the north side of the building, 200' from the south end of the building and 225' from the rear or east side of the building. The closest townhome to the east is approximately 160' from the rear of the building. Staff supports the proposed location of the HVAC units.

A line of sight study is included in the Commissioner's packet. The the closest townhome is approximately 165 feet from the rear of the proposed structure. As a point of comparison, the commercial center to the north of the townhomes is approximately 107' from the nearest townhome; 60' from the fence.



The trash receptacle will be enclosed on two sides with a 6' brick wall; the third side will be the brick exterior wall of the warehouse. The gates will be a heavy duty metal with wood facing. Details can be found on Sheet A.2.0.

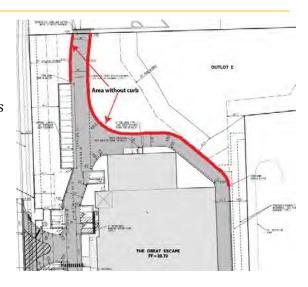
SIGNAGE

The proposed sign indicates individually lit letters, royal blue in color. The plan indicates the sign comprises 40 SF, it therefore meets Village ordinance. A ground mounted sign is indicated on the site plan with a 10' setback, however a sign has not been proposed. The Applicant understands that the sign must meet Village requirements.

STAFF REVIEW: ENGINEERING

The Village Engineer provided a list of concerns to the Applicant. Most of these issues will be resolved through final engineering review; final engineering approval will be required prior to issuance of a Building Permit.

The proposed site plan indicates an area without curb. Curbs are required between vehicular use and landscaped areas. The Applicant has requested that the curb in this area be phased in after they determine if future retail will be developed to the north. Staff does not support this request as the timing for future retail is undetermined and the uncurbed area will be utilized with the proposed development. The drive aisle is visible from LaGrange and access will be provided to the property to the north. Sheet flow drainage may also causes erosion issues along the edge of pavement.



Open Item #1: Areas of the access drive aisle are proposed without curbs.

The Engineer has also raised questions regarding the cross section for the right-in/right-out access at LaGrange Road. Plans indicate this to be striped. Staff is requesting a mountable median (2") that clearly depicts the appropriate turning movements but still allows turning maneuvers for delivery and firetruck vehicles.

Open Item #2: Right-in/Right-out cross section indicates a striped median; Staff is recommending a 2" mountable median.

STAFF REVIEW: FIRE DEPARTMENT

The Fire Department provided comments to the Applicant regarding Building Life Safety and Fire Protection. Final approval from the Fire Department will be required prior to final approval.

RECOMMENDATION/RECOMMENDED MOTION

Assign two Commissioners to meet with the Applicant in a work session with Staff.

Brixmor – 15917 Harlem Avenue LIST OF SUBMITTED PLANS

	Submitted Sheet Name	Prepared By	Date On Sheet
C.1	Cover Sheet	Spaceco, Inc.	07/15/14
	Typical Sections and General		
TS1	Notes	Spaceco, Inc.	04/22/15
EX1	Existing Conditions	Spaceco, Inc.	04/22/15
GM1	Geometric Plan	Spaceco, Inc.	04/22/15
GR1	Grading Plan	Spaceco, Inc.	04/22/15
UT1	Utility Plan	Spaceco, Inc.	04/22/15
SE1	Soil Erosion and Sediment Control Plan – 1	Spaceco, Inc.	04/22/15
SE2	Soil Erosion and Sediment Control Plan - 2	Spaceco, Inc.	04/22/15
SE3	Soil Erosion and Sediment Control Plan - 3	Spaceco, Inc.	04/22/15
S1	Specifications	Spaceco, Inc.	04/22/15
D1	Details – 1	Spaceco, Inc.	04/22/15
D2	Details – 2	Spaceco, Inc.	04/22/15
EXH-1	Truck Turn Exhibit – WB - 65	Spaceco, Inc.	04/22/15
EXH-2	Truck Turn Exhibit - Firetruck	Spaceco, Inc.	04/22/15
MWRD	MWRD Drainage Exhibit	Spaceco, Inc.	04/22/15
XS1	Cross Sections – 1	Spaceco, Inc.	04/22/15
XS2	Cross Sections – 2	Spaceco, Inc.	04/22/15
1 of 1	Plat of Easement	Spaceco, Inc.	04/21/15
1 of 1	Plat of Survey	Spaceco, Inc.	04/23/15
L1.1	Phase 1 Planting Plan	GEIS Companies	(Rec.) 04/30/15
L1.2	Phase 2 Evergreen Tree Planting	GEIS Companies	(Rec.) 04/30/15
L1.1	Phase 1 Planting Plan – Area Calc.	GEIS Companies	02/27/15
A.1.2	Site Plan – Adjacency Plan	GEIS Companies	02/11/15
	Rendered Perspective	GEIS Companies	N/A
A.2.0	Site Signage/Dumpster	GEIS Companies	03/09/15
A.1.2	Elevations	GEIS Companies	03/09/15
A-300	Elevations – Color	GEIS Companies	02/20/15
A.1.2a	RTU Sight Line Study	GEIS Companies	03/09/15
E.1.1	Site Photometric	GEIS Companies	03/03/15
	Lighting Spec Sheet		

JASJoseph A. Schudt & AssociatesLSILSI IndustriesM&CMetz & CompanySPIESSPIES & Associates, IncDZADZA Associates, Inc.HubbardtonHubbardton Forge

SITE IMPROVEMENT PLANS for

THE GREAT ESCAPE

VILLAGE OF TINLEY PARK COOK COUNTY, ILLINOIS PROJECT NO: 8126

GENERAL CONTRACTOR

GEIS CONSTRUCTION
10020 AURORA-HUDSON ROAD
STREETSBORO, OHIO 44241
PH: (330) 528-3500

CALL J.U.L.I.E. 1-800-892-0123 WITH THE FOLLOWING:

COUNTY COOK CITY, TOWNSHIP TINLEY PARK, ORLAND

SEC. & 1/4 SEC. NO. T36N, R12E, SEC 27 (SW 1/4)

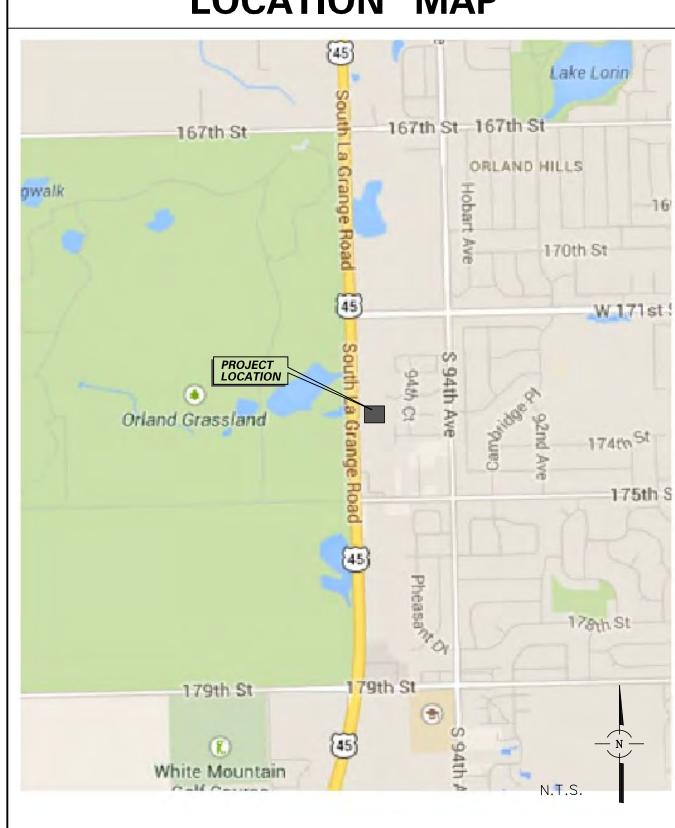
48 HOURS BEFORE YOU DIG. EXCLUDING SAT., SUN. & HOLIDAYS

		INDEX
SHEET #	SHEET I.D.	SHEET DESCRIPTION
1	C1	COVER SHEET
2	TS1	TYPICAL SECTIONS AND GENERAL NOTES
3	EX1	EXISTING CONDITIONS
4	GM1	GEOMETRIC PLAN
5	GR1	GRADING PLAN
6	UT1	UTILITY PLAN
7-9	SE1-SE3	SOIL EROSION AND SEDIMENT CONTROL PLANS
10	S1	SPECIFICATIONS
11-12	D1-D2	DETAILS
13-14	EXH1-EXH2	TRUCK TURN EXHIBITS
15	MWRD	MWRD DRAINAGE EXHIBIT
16-17	XS1-XS2	CROSS SECTIONS

SOURCE BENCHMARK

DESCRIPTION: MARKHAM COOK CO CORS ARP NGS CORS ID CCMK NGS PID DN7484 ELLIPSOID HEIGHT = 169.535 M (OR 556.246FT) ORTHO HEIGHT = 665.783 FT DATUM NAVD 88 GEOID 12A

LOCATION MAP



SITE BENCHMARK ELEVATION: **733.95**

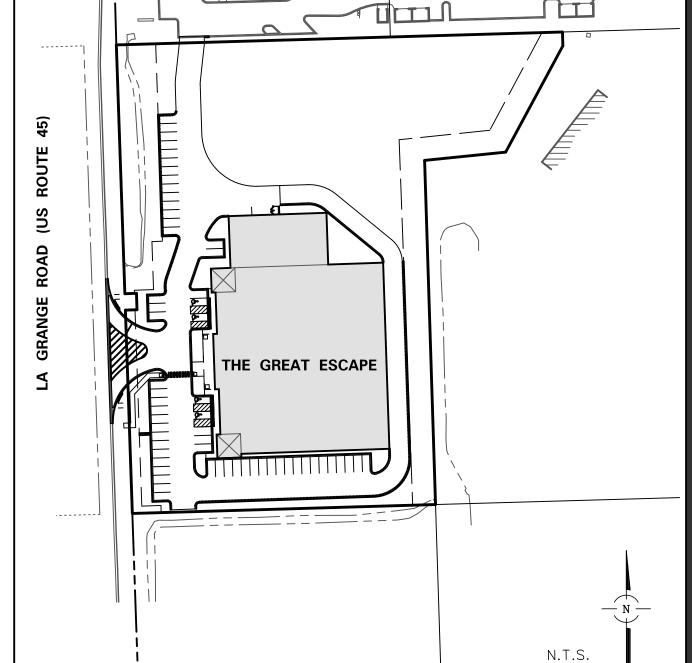
DESCRIPTION: CUT SQUARE ON LIGHT POLE BASE SOUTH OF BANK DRIVE THRU.

KEY MAP

NOTE:

SPACECO, INC. IS TO BE NOTIFIED AT LEAST

THREE (3) DAYS PRIOR TO STARTING CONSTRUCTION



	DRIGINAL PLA	N DATE: JULY 15, 2014	
#	SHEET #	REMARKS	DATE
1	ALL	SET FOR PERMIT SUBMITTAL	08/11/14
2	4-6,9,12	PER CLIENT	12/22/14
3	ALL	PER CLIENT	02/27/15
4	ALL	PER VILLAGE / MWRDGC	04/22/15

REVISIONS

ENGINEER DATE MICHAEL MONDUS, P.E.	_
ILLINOIS REGISTRATION NO.: 062-052057 EXPIRATION DATE: 11/30/2015	SEAL
PROFESSIONAL DESIGN FIRM NO.: 184-001157 EXPIRATION DATE: 04/30/2015	
THESE PLANS OR ANY PART THEREOF SHALL BE CONSIDERED THE SIGNATURE , SEAL, AND EXPIRATION DATE OF SEAL OF	

N:\Projects\8126\ENG\8126TITLE.dgn Default User=bbarker

GENERAL NOTES

- ALL PAVEMENT AND STORM SEWER CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (SSRBC), AND SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS;
 ADOPTED JANUARY 1, 2012 BY ILLINOIS DEPARTMENT OF TRANSPORTATION AND ALL AMENDMENTS THERETO; AND
 IN ACCORDANCE WITH THE LATEST EDITION OF THE CODE OF THE MUNICIPALITY; EXCEPT AS MODIFIED HEREIN. IN CASE OF CONFLICT, MUNICIPAL CODE SHALL TAKE PRECEDENCE.
- ALL SANITARY SEWER AND WATERMAIN CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FO WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, PUBLISHED JULY 2009, AND IN ACCORDANCE WITH THE CODE OF THE MUNICIPALITY; EXCEPT AS MODIFIED HEREIN OR BY ANY PUBLIC AGENCY PERMITS ISSUED FOR THIS WORK. IN CASE OF CONFLICT, THE MORE RESTRICTIVE PROVISIONS SHALL APPLY.
- ALL SIDEWALK AND PUBLIC AREAS MUST BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ADA, ILLINOIS HANDICAP ACCESSIBILITY AND ANY APPLICABLE LOCAL ORDINANCES. WHEN CONFLICTS EXIST BETWEEN THE GOVERNING AGENCIES, THE MORE STRINGENT SHALL GOVERN.
- THE CITED STANDARD SPECIFICATIONS, CODES AND PERMITS, WITH THESE CONSTRUCTION PLANS AND DETAILS, ARE ALL TO BE CONSIDERED PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE CONSIDERED A PART OF THIS CONTRACT.

2. UTILITY LOCATIONS

1. REFERENCED CODES

- THE UTILITY COMPANIES HAVE BEEN CONTACTED IN REFERENCE TO UTILITIES THEY OWN AND OPERATE WITHIN THE LIMITS FOR THIS PROJECT. DATA FROM THESE AGENCIES HAS BEEN INCORPORATED INTO THE PLANS. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM OR ESTABLISH THE EXISTENCE OF ALL UTILITY FACILITIES AND THEIR EXACT LOCATIONS, AND TO SAFELY SCHEDULE ALL UTILITY RELOCATIONS. FOR ADDITIONAL
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES. THE ENGINEER DOES NOT WARRANT THE LOCATION OF ANY EXISTING UTILITIES SHOWN ON THE PLAN. THE CONTRACTOR SHALL CALL J.U.L.I.E. AT 800-892-0123 AND THE MUNICIPALITY, FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND THE MUNICIPALITY TWENTY-FOUR (24) HOURS PRIOR
- EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT WITH LOCATIONS OF THE NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.

3. UTILITY COORDINATION

9. COMMENCING CONSTRUCTION

- OWNER SHALL OBTAIN EASEMENTS AND PERMITS NECESSARY TO FACILITATE CONSTRUCTION OF THE PROPOSED UTILITIES. THE CONTRACTOR, HOWEVER, SHALL FURNISH ALL REQUIRED BONDS AND EVIDENCE OF INSURANCE
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE NATURE AND STATUS OF ALL UTILITY RELOCATION WORK PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ENSURE TH CONSTRUCTION OPERATIONS DO NOT INTERFERE WITH UTILITY FACILITIES AND RELOCATION WORK. THE SCHEDULE SHOULD REFLECT CONSTRUCTION SEQUENCING WHICH COORDINATES WITH ALL UTILITY RELOCATION WORK. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST THE ORDER OF ITS WORK FROM TIME TO TIME, TO COORDINATE SAME WITH UTILITY RELOCATION WORK, AND SHALL PREPARE REVISED SCHEDULE(S) IN COMPLIANCE THEREWITH AS
- THE OWNER AND THE ENGINEER SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY OPERATION REQUIRING COOPERATION WITH OTHERS. AT&T SHALL BE CONTACTED ONE MONTH PRIOR TO START OF CONSTRUCTION IN ITS UTILITY AREAS. ALL OTHER AGENCIES, UNLESS OTHERWISE NOTED, SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR TEN (10) DAYS PRIOR TO THE START OF ANY SUCH
- NO PLAN SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED "FOR CONSTRUCTION", PRIOR TO COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING TH WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE ENGINEER'S LINE AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES WITH WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE MUST IMMEDIATELY REPORT SAME TO ENGINEER BEFORE DOING ANY WORK, OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTIONS ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.
- ALL PROPOSED ELEVATIONS SHOWN ON THE PLANS ARE FINISHED SURFACE ELEVATIONS, UNLESS OTHERWISE SPECIFIED.
- UPON AWARDING OF THE CONTRACT, AND WHEN REQUIRED BY THE MUNICIPALITY OR OWNER, THE CONTRACTOR SHALL FURNISH A LABOR, MATERIAL AND PERFORMANCE BOND IN THE AMOUNT REQUIRED GUARANTEEING COMPLETION OF THE WORK. THE UNDERWRITER SHALL BE ACCEPTABLE TO THE MUNICIPALITY OR OWNER, AS APPROPRIATE.
- THE CONTRACTORS SHALL PLAN THEIR WORK BASED ON THEIR OWN BORINGS, EXPLORATIONS AND OBSERVATIONS TO DETERMINE SOIL CONDITIONS AT THE LOCATION OF THE PROPOSED WORK, HOWEVER, IF THE OWNER HAS A SOILS REPORT, THE RESULTS WILL BE AVAILABLE FROM THE OWNER UPON WRITTEN REQUEST.

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

- THE CONTRACTOR SHALL NOTIFY THE OWNER AND/OR HIS REPRESENTATIVE AND THE AFFECTED GOVERNMENTAL AGENCIES IN WRITING AT LEAST THREE FULL WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL NOTIFY AS NECESSARY, ALL TESTING AGENCIES, EITHER MUNICIPALITY'S OR THE OWNER'S, SUFFICIENTLY IN ADVANCE OF CONSTRUCTION. ALL MATERIAL TESTING SHALL BE THE RESPONSIBILITY AND EXPENSE OF THE CONTRACTOR. THE TESTING AGENCY SHALL MEET THE APPROVAL OF THE OWNER.
- FAILURE OF CONTRACTOR TO ALLOW PROPER NOTIFICATION TIME WHICH RESULTS IN TESTING COMPANIES TO BE UNABLE TO VISIT SITE AND PERFORM TESTING WILL CAUSE CONTRACTOR TO SUSPEND OPERATION (PERTAINING TO TESTING) UNTIL TESTING AGENCY CAN SCHEDULE TESTING OPERATIONS. COST OF SUSPENSION OF WORK TO BE
- ALL CONTRACTORS SHALL KEEP ACCESS AVAILABLE AT ALL TIMES FOR ALL TYPES OF TRAFFIC. AT NO TIME SHALL ACCESS BE DENIED TO ADJACENT PROPERTIES.
- THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES UNTIL THEY ARE NO LONGER NEEDED. ANY STAKES DESTROYED OR DISTURBED BY THE CONTRACTOR PRIOR TO THEIR USE SHALL BE RESET BY THE DEVELOPER'S ENGINEER
- ANY EXISTING SIGNS, LIGHT STANDARDS AND UTILITY POLES WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND NOT NOTED FOR DISPOSAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT HIS OWN EXPENSE AS SHOWN ON THE ENGINEERING PLANS OR AS DIRECTED BY THE DEVELOPER. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE SATISFACTION OF THE OWNER. ANY SIGNS NOT REQUIRED TO BE RESET, SHALL BE DELIVERED TO THE RESPECTIVE OWNERS.
- REMOVAL OF SPECIFIED ITEMS, INCLUDING BUT NOT LIMITED TO, PAVEMENT, SIDEWALK, CURB, CURB AND GUTTER, CULVERTS, ETC. SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE. HE IS RESPONSIBLE FOR ANY PERMIT REQUIRED FOR SUCH DISPOSAL.
- ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM OR SHALL BE RESTORED TO PROPER OPERATING CONDITION. A RECORD OF THE LOCATION OF ALL FIELD LE OR DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND TURNED OVER TO THE ENGINEER, DEVELOPER OR MUNICIPAL ENGINEER UPON COMPLETION OF THE PROJECT. THE COST OF THIS WORK SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 15. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY ON THE JOB.
- THE CONTRACTOR SHALL COLLECT AND REMOVE ALL CONSTRUCTION DEBRIS, EXCESS MATERIALS, TRASH, OIL AND GREASE RESIDUE, MACHINERY, TOOLS AND OTHER MISCELLANEOUS ITEMS WHICH WERE NOT PRESENT PRIOR TO PROJECT COMMENCEMENT AT NO ADDITIONAL EXPENSE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY AND ALL PERMITS NECESSARY FOR THE HAULING AND DISPOSAL REQUIRED FOR CLEAN-UP AS DIRECTED BY THE ENGINEER OR OWNER. BURNING ON THE SITE IS NOT PERMITTED.
- ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT AND PARKWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS SPECIFICALLY NOTED ON THE PLANS.
- TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND SHALL BE PROTECTED UNDER THE PROVISIONS OF (SSRBC) ARTICLE 201.05.
- LIMB PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF THE LANDSCAPE ARCHITECT MEETING THE OWNER'S APPROVAL AND SHALL BE UNDERTAKEN IN A TIMELY FASHION SO AS NOT TO INTERFERE WITH CONSTRUCTION.
- ALL LIMBS, BRANCHES, AND OTHER DEBRIS RESULTING FROM THIS WORK SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE OFF-SITE.
- ALL CUTS OVER 1" IN DIAMETER SHALL BE MADE FLUSH WITH THE NEXT LARGE BRANCH. WOUNDS OVER 1" IN DIAMETER SHALL BE PAINTED WITH AN APPROVED TREE PAINT.

22. GENERAL EXCAVATION/UNDERGROUND NOTES

- SLOPE SIDES OF EXCAVATIONS TO COMPLY WITH CODES AND ORDINANCES HAVING JURISDICTION. SHORE AND BRACE WHERE SLOPING IS NOT POSSIBLE EITHER BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL EXCAVATED. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN A SAFE CONDITION UNTIL COMPLETION OF
- PROVIDE MATERIALS FOR SHORING AND BRACING, SUCH AS SHEET PILING, UPRIGHTS, STRINGERS AND CROSS BRACES, IN GOOD SERVICEABLE CONDITION. PROVIDE MINIMUM REQUIREMENTS FOR TRENCH SHORING AND BRACING TO COMPLY WITH CODES AND AUTHORITIES HAVING JURISDICTION. MAINTAIN SHORING AND BRACING IN EXCAVATIONS REGARDLESS OF TIME PERIOD EXCAVATIONS WILL BE OPEN. CARRY DOWN SHORING AND BRACING AS EXCAVATION PROGRESSES IN ACCORDANCE WITH OSHA AND GOVERNING AUTHORITY.
- PREVENT SURFACE WATER AND SUBSURFACE OR GROUNDWATER FROM FLOWING INTO EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. PROVIDE AND MAINTAIN PUMPS, SUMPS, SUCTION AND DISCHARGE LINES AND OTHER DEWATERING SYSTEM COMPONENTS NECESSARY TO CONVEY WATER AWAY FROM EXCAVATIONS. CONVEY WATER REMOVED FROM EXCAVATIONS AND RAINWATER TO COLLECTING OR RUN-OFF AREAS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. PROVIDE AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS FOR EACH STRUCTURE. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.
- IMMEDIATELY REPORT CONDITIONS THAT MAY CAUSE UNSOUND BEARING TO THE OWNER/DEVELOPER BEFORE CONTINUING WORK.

- ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR AND HIS SURETY FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF FINAL ACCEPTANCE OF THE PROJECT AND THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DEFECTS IN MATERIALS AND WORKMANSHIP OF WHATEVER NATURE DURING THAT PERIOD. THIS GUARANTEE SHALL BE PROVIDED IN THE FORM OF MAINTENANCE BOND IN THE AMOUNT OF 10%
- BEFORE ACCEPTANCE BY THE OWNER AND FINAL PAYMENT, ALL WORK SHALL BE INSPECTED BY THE OWNER OR HIS REPRESENTATIVE. FINAL PAYMENT WILL BE MADE AFTER ALL THE CONTRACTOR'S WORK HAS BEEN APPROVED AND
- NO UNDERGROUND WORK SHALL BE COVERED UNTIL IT HAS BEEN APPROVED BY THE MUNICIPALITY. APPROVAL TO PROCEED MUST BE OBTAINED FROM THE MUNICIPALITY PRIOR TO INSTALLING PAVEMENT BASE, BINDER, SURFACE, AND PRIOR TO PLACING ANY CONCRETE AFTER FORMS HAVE BEEN SET.
- AT THE CLOSE OF EACH WORKING DAY AND AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS.

24. UNDERGROUND NOTES

- UNDERGROUND WORK SHALL INCLUDE TRENCHING, INSTALLATION OF PIPE, CASTINGS, STRUCTURES, BACKFILLING OF TRENCHES AND COMPACTION AND TESTING AS SHOWN ON THE CONSTRUCTION PLANS. FITTINGS AND ACCESSORIES NECESSARY TO COMPLETE THE WORK MAY NOT BE SPECIFIED, BUT SHALL BE CONSIDERED AS
- WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, EXISTING DRAINAGE STRUCTURES AND SYSTEMS SHALL BE CLEANED OF DEBRIS AND PATCHED AS NECESSARY TO ASSURE INTEGRITY OF THE STRUCTURE. THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STRUCTURES AND CONTRACT UNIT PRICE PER LINEAL FOOT FOR SYSTEMS WHICH SHALL BE PAYMENT IN FULL FOR CLEANING, PATCHING, REMOVAL AND DISPOSAL OF DEBRIS AND DIRT, DRAINAGE STRUCTURES AND SYSTEMS CONSTRUCTED AS PART OF THIS PROJECT SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS EXPENSE. NO PAYMENT WILL BE MADE FOR CLEANING STRUCTURES OR SYSTEMS CONSTRUCTED AS PART OF THIS PROJECT.
- ANY DEWATERING OF SEWER AND WATER TRENCHES AS WELL AS TEMPORARY SHEETING OR BRACING THAT MAY BE REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL NOT BE CONSIDERED EXTRA WORK UNLESS THERE IS A SPECIFIC LINE ITEM FOR DEWATERING. IN THE EVENT THAT SOFT MATERIALS WITH UNCONFINED COMPRESSIVE STRENGTH LESS THAN 0.5 TSF ARE ENCOUNTERED IN SEWER CONSTRUCTION, THE CONTRACTOR SHALL (UPON APPROVAL OF THE OWNER AND/OR ENGINEER) OVER-EXCAVATE TO A DEPTH OF ONE (1) FOOT BELOW THE BOTTOM OF THE PIPE AND BACKFILL WITH COMPACTED CRUSHED STONE, PROPERLY FORMED TO FIT THE
- TRENCH BACKFILL WILL BE REQUIRED FOR THE FULL TRENCH DEPTH WITHIN TWO (2) FEET OF PROPOSED OR EXISTING PAVEMENTS, UTILITIES, DRIVEWAYS, AND SIDEWALKS AND EXTENDING A DISTANCE EQUAL TO A 1:1 SLOPE FROM SUBGRADE ELEVATION TO TOP OF PIPE. THE TRENCH BACKFILL SHALL CONSIST OF GRANULAR MATERIAL MEETING IDOT CA-6 GRADATION. THE TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH (SSRBC) SPECIFICATIONS. JETTING WITH WATER SHALL NOT BE PERMITTED. THE COST OF SUCH CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THIS CONTRACT AND SHALL BE INCLUDED IN THE UNIT PRICE OF THE PIPE. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.
- THE CONTRACTOR SHALL INSTALL A 4" X 4" X 8' (NOMINAL) POST AT THE TERMINUS OF THE SANITARY, WATER AND STORM SERVICE, SANITARY AND STORM MANHOLES, CATCH BASINS, INLETS AND WATER VAULTS. THE POST SHALL EXTEND 4' ABOVE THE GROUND. THE TOP 12" OF SAID POST SHALL BE PAINTED AS FOLLOWS: SANITARY - RED. WATERMAIN - BLUE, STORM - GREEN.
- AFTER THE STORM SEWER SYSTEM HAS BEEN CONSTRUCTED, THE CONTRACTOR SHALL PLACE EROSION CONTROL AT REAR YARD INLET LOCATIONS, AND AT OTHER LOCATIONS SELECTED BY THE ENGINEER, TO MINIMIZE THE AMOUNT OF SILTATION WHICH NORMALLY WOULD ENTER THE STORM SEWER SYSTEM.
- HYDRANTS SHALL NOT BE FLUSHED DIRECTLY ON THE ROAD SUBGRADES. WHENEVER POSSIBLE, HOSES SHALL B USED TO DIRECT THE WATER INTO LOT AREAS OR THE STORM SEWER SYSTEM (IF AVAILABLE). DAMAGE TO THE ROAD SUBGRADE OR LOT GRADING DUE TO EXCESSIVE WATER SATURATION AND/OR EROSION FROM HYDRANT FLUSHING, OR FROM LEAKS IN THE WATER DISTRIBUTION SYSTEM, WILL BE REPAIRED BY THE CONTRACTOR AT HIS COST.
- ALL TOP OF FRAMES FOR STORM AND SANITARY SEWERS AND VALVE VAULT COVERS ARE TO BE ADJUSTED TO MEET FINAL FINISH GRADE. THIS ADJUSTMENT IS TO BE MADE BY THE SEWER AND WATER CONTRACTOR AND THE COST IS TO BE CONSIDERED INCIDENTAL. THESE ADJUSTMENTS TO FINISHED GRADE WILL NOT ALLEVIATE THE CONTRACTOR FROM ANY ADDITIONAL ADJUSTMENTS AS REQUIRED BY THE MUNICIPALITY UPON FINAL INSPECTION OF THE PROJECT. (FINAL GRADES TO BE DETERMINED BY THE MUNICIPALITY AT THE TIME OF FINAL INSPECTION AND MAY VARY FROM PLAN GRADE.)
- SLEEVES FOR UTILITY (COMED, TELEPHONE, ETC.) STREET CROSSING, SHALL BE INSTALLED WHERE DIRECTED BY THE OWNER. SLEEVES SHALL BE 6" PVC INSTALLED 36" BELOW THE TOP OF CURB AND EXTEND TWO FEET OUTSIDE THE CURB. TRENCH SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL.
- THE CONTRACTOR SHALL VERIFY THE SIZE AND INVERT ELEVATION OF ALL CONNECTIONS TO AVOID ANY CONFLICTS BEFORE STARTING WORK. NOTIFY OWNER OF ANY DISCREPANCIES.
- IT SHALL BE UNDERSTOOD THAT NEITHER THE MUNICIPALITY, ITS OFFICIALS, CONSULTANTS, NOR ITS EMPLOYEES ARE AGENTS OF OR REPRESENTATIVES OF THE OWNER. NONE-THE-LESS, THE MUNICIPALITY, TS OFFICIALS AND EMPLOYEES ARE TO BE PROVIDED SAFE ACCESS TO ALL PHASES OF ALL WORK PERFORMED ON HE PROJECT SITE TO MONITOR THE QUALITY OF THE WORK AND ASSURE ITS CONFORMITY WITH THE PLANS AND SPECIFICATIONS. THERE SHALL BE NO PERSONAL LIABILITY UPON ANY OFFICIAL OR EMPLOYEE OF THE MUNICIPALITY ON ACCOUNT OF ACTIONS TAKEN OR NOT TAKEN IN THE COURSE OF THEIR WORK. THE CONTRACTOR MUST AT ALL TIMES MAINTAIN A SAFE ACCESS TO THE WORK FOR INSPECTORS. "SAFE": MEANING CONDITIONS COMPLYING WITH ALL PROVISIONS OF ALL APPLICABLE AND RECOGNIZED SAFETY STANDARDS, FEDERAL, STATE AND LOCAL. IF ACCESS IS NOT SAFE AND INSPECTIONS CANNOT BE MADE UNDER SAFE CONDITIONS, THE INSPECTOR CAN ORDER CESSATION OF THE WORK SO AFFECTED UNTIL SUCH TIME AS CONTRACTOR PROVIDES SAFE ACCESS.

MWRD NOTES

- ITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO (MWRDGC) SEWER PERMIT SECTION FIELD BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK (CALL 55). FOR THE CONTRACTOR'S PROTECTION, CERTIFIED MAIL WRITTEN NOTICE IS PREFERABLE PROVIDED
- 2. ELEVATION DATUM IS USGS.

D-3034

F--679

18''-27" dia. F/dy=46

- 3. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.
- 4. ALL DOWNSPOUTS, SUMP PUMPS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.
- 5. All sanitary sewer pipes and joints, and also storm sewer pipes and joints in a combined sewer area shall conform to the following specifications:

Material VCP (C-700) VCP (No-Bell)(C-700)	Joint Spec C-425
Joint Collar Concrete Pipe (C-14)	C-425 D-1784 C-443
RCP (C-76) ACP (C-428)	C-443 D-1869
Composite Pipe (Truss) ABS D-2751 6" dia. only SDR26	D-2751
ABS D-2680 8"-15" dia.	D-2680
CISP ASTM A-74 DIP A-21.51	ASTM C-564 A-21.11
PVC Gravity Sewer Pipe 6"-15" dia. SDR26	D-3212

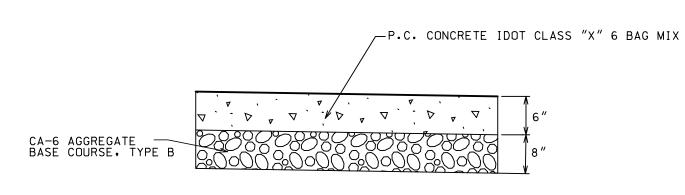
<u>High Density Polyethylene (HDPE) Plastic Pipe</u> Polyethylene (HDPE) Sewer Pipe shall conform t Type III, Class B (or better), category 5, Grade P34 as defined in ASTM D-1248 and/or D-3350 with a cell classification PE 345434C or higher. The joining method shall conform to ASTM D-2657.

All sanitary sewer construction, and also storm sewer construction in combined sewer areas, requires stone bedding $\frac{1}{4}$ " to 1" in size, with minimum thickness equal to $\frac{1}{4}$ 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.

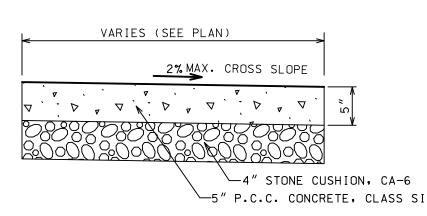
- 7. "BAND-SEAL" OR SIMILAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPE OF
- DISSIMILAR MATERIALS. 8. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED. 1. CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SEWER-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 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 WATER MAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATER MAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATER MAINS 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 WATER MAIN 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 CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS USING DUCTILE IRON PIPE, PRESSURE PVC PIPE, OR
- AN APPROVED EQUAL. 10. ALL EXISTING SEPTIC SYSTEMS TO BE ABANDONED. ABANDONED TANKS TO BE FILLED OR REMOVED. 11. ALL SANITARY MANHOLES, AND ALSO STORM MANHOLES IN COMBINED SEWER AREAS, SHALL HAVE A MINIMUM INSIDE
- DIAMETER OF 48 INCHÉS, AND SHALL BE CAST-IN-PLACE OR PRE-CAST REINFORCÉD CONCRETE. RESILIENT CONNECTORS, CONFORMING TO ASTM C-923, SHALL BE USED BETWEEN MANHOLE AND PIPE(S). 12. NO SEWER SHALL BE BACKFILLED UNLESS IT HAS BEEN INSPECTED AND APPROVED BY THE INSPECTION ENGINEER
- OR HIS AUTHORIZED REPRESENTATIVE AND THE BACKFILLING AUTHORIZED BY HIM. 13. A COPY OF THE PERMIT TOGETHER WITH THE PERMIT DRAWINGS MUST BE KEPT ON THE JOB AT ALL TIMES WHILE CONSTRUCTION IS IN PROGRESS.
- 14. CONSTRUCTION SHALL CONFORM TO THE PERMIT PLANS AND SPECIFICATIONS AND BE IN ACCORDANCE WITH APPLICABLE RULES AND REGULATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT THE INSTALLATION IS INSPECTED AND APPROVED BY THE INSPECTION ENGINEER AND THE MUNICIPAL ENGINEER.

15. SUMP PUMPS INSTALLED FOR SANITARY SEWERS SHALL NOT BE USED FOR STORM SEWERS. THOSE INSTALLED FOR

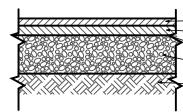
- STORM SEWERS SHALL NOT BE USED FOR SANITARY SEWERS. 16. EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, DRAIN TILES/FIELDTILES/UNDERDRAINS
 /PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS,
 OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS IN COMBINED SEWER AREAS. CONSTRUCTION OF NEW FACILITIES
 OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES ON PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS, OR STORM
- SEWERS TRIBUTARY TO COMBINED SEWERS. 17. SEE ADDITIONAL PROJECT REQUIREMENTS IN SPECIFICATIONS.



TYPICAL SECTION - CONCRETE PAVEMENT NOT TO SCALE



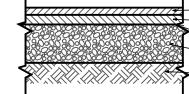
TYPICAL SIDEWALK DETAIL NOT TO SCALE



- 1.5" HOT MIX ASPHALT SURFACE COURSE, N50 2.5" HOT MIX ASPHALT BINDER COURSE IL 19.0, N50 BITUMINOUS MATERIALS (PRIME COAT)
- 12" AGGREGATE BASE, CA−6, TYPE A - COMPACTED SUBGRADE

STRUCTURAL NUMBER 1.5" × 0.40=0.60 2.5" × 0.33=0.74 12" × 0.11=1.11 SN=2.76

<u>TYPICAL SECTION - BITUMINOUS PAVEMENT (HEAVY DUTY)</u> NOT TO SCALE



- 1.5" HOT MIX ASPHALT SURFACE COURSE, N50 2.25" HOT MIX ASPHALT BINDER COURSE IL 19.0, N50 BITUMINOUS MATERIALS (PRIME COAT)
- 10" AGGREGATE BASE, CA−6, TYPE A COMPACTED SUBGRADE

 $1.5" \times 0.40 = 0.60$ 2.25"x 0.33=0.74 \times 0.11=1.11 SN=2.45

STRUCTURAL NUMBER

<u>TYPICAL SECTION - BITUMINOUS PAVEMENT (LIGHT DUTY)</u>

NOT TO SCALE

	LEGEND	1
EXISTING	DESCRIPTION	PROPOSED
→	— DRAIN TILE	
->	- STORM SEWER	->>
- 	SANITARY SEWER	->>
<i>→</i> >>	> SANITARY TRUNK SEWER	->>
-W8'	- WATER MAIN (WITH SIZE)	-w 8"
	PIPE TRENCH BACKFILL	
_GG	— GAS MAIN	_c
_тт	- TELEPHONE LINES	_тт-
—Е———Е	- ELECTRIC LINE	— ЕЕ-
x	— FENCE	×
	- RIGHT-OF-WAY	
	- · EASEMENT	
	- PROPERTY LINE	
	- SETBACK LINE	
	CENTERLINE	
680	CONTOUR	680
©	SANITARY MANHOLE	0
©	STORM MANHOLE	•
<i>Ø</i>	CATCH BASIN	•
	INLET	
q	FIRE HYDRANT	•
	PRESSURE CONNECTION	•
	PIPE REDUCER	>
Θ	VALVE AND VAULT, VALVE	•
◁	FLARED END SECTION	<
¤	STREET LIGHT	×
-0-	UTILITY POLE	•
<u>&</u>	CONTROL POINT	
d	SIGN	4
	SPOT ELEVATION	××ו××
+	SOIL BORING	•
	OVERLAND FLOW ROUTE	-
	DRAINAGE SLOPE	~~ OR →
	GUARDRAIL	
<u> </u>	WATER'S EDGE	~~
	CONCRETE	
	REVERSE PITCH CURB	111111111111111111111111111111111111111
	TREE, FIR TREE, BUSH, &	XX
(0)[0]{	PROPOSED TREE TO REMOVE	(X)

ABBREVIATIONS

- I = INVERT OR INLET M = STORM MANHOLE TF = TOP OF FOUNDATION S = SANITARY MANHOLE
- GF = GARAGE FLOOR CB = CATCH BASIN TC = TOP OF CURB LP = LIGHT POLE
- TD = TOP OF DEPRESSED CURB VV = VALVE VAULT TW = TOP OF RETAINING WALL E = END SECTION
- FH = FIRE HYDRANT BW = BOTTOM OF RETAINING WALL

GR = GRADE RING (HYDRANT) OP = OUTLET OF PIPE DEDMITS

PERIII15		
LOG NO.	PERMIT NO.	DATE ISSUED
2015-076		
016-63394		
	LOG NO. 2015-076	LOG NO. PERMIT NO. 2015-076

CONTACT INFORMATION

AT&T CABLE SERVICES 688 INDUSTRIAL DRIVE ELMHURST, IL 60126 PHONE: (630) 600-6346

AT&T (PHONE SERVICE)

2427 UNION STREET, 2nd FLOOR BLUE ISLAND, ILLINOIS 60406 PHONE: (708) 396-7628

COMMONWEALTH EDISON 4401 WEST 135th STREET CRESTWOOD, ILLINOIS 60445 PHONE: (708) 396-3435

(L.S.S. FIELD OFFER PHONE NUMBER) VILLAGE OF TINLEY PARK 16250 S. OAK PARK AVENUE TINLEY PARK, ILLINOIS 60477 (708) 444-5000

NICOR GAS 3000 CASS AVENUE JOLIET, ILLINOIS PHONE: (815) 740-4100 x277 ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1 201 W. CENTER COURT SCHAMBURG, ILLINOIS 60196-4131 (847) 705-4131

		REMARKS
		DATE
		NO.

4	04/22/15	04/22/15 PER VILLAGE / MWRDGC	
3	02/27/15	02/27/15 PER CLIENT	
NO.	DATE	REMARKS	ž

EA

9 SECTIONS

GENER/

T/P = TOP OF PIPE

WM = WATERMAIN

LO = LOOK OUT

B/P = BOTTOM OF PIPE

SAN = SANITARY SEWER

PLO = PARTIAL LOOK OUT

STM = STORM SEWER

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

100 E. ERIE STREET CHICAGO, ILLINOIS 60611

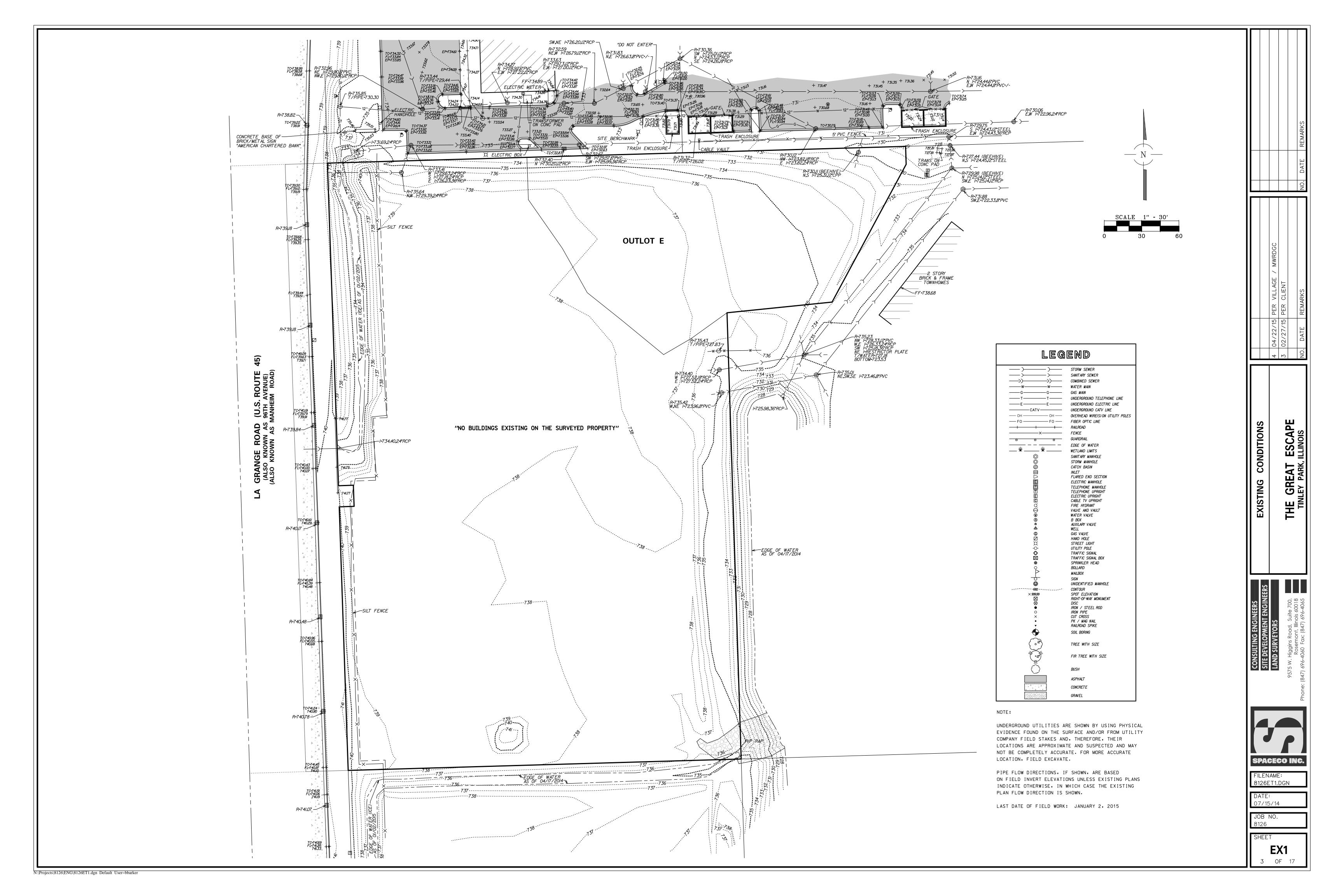


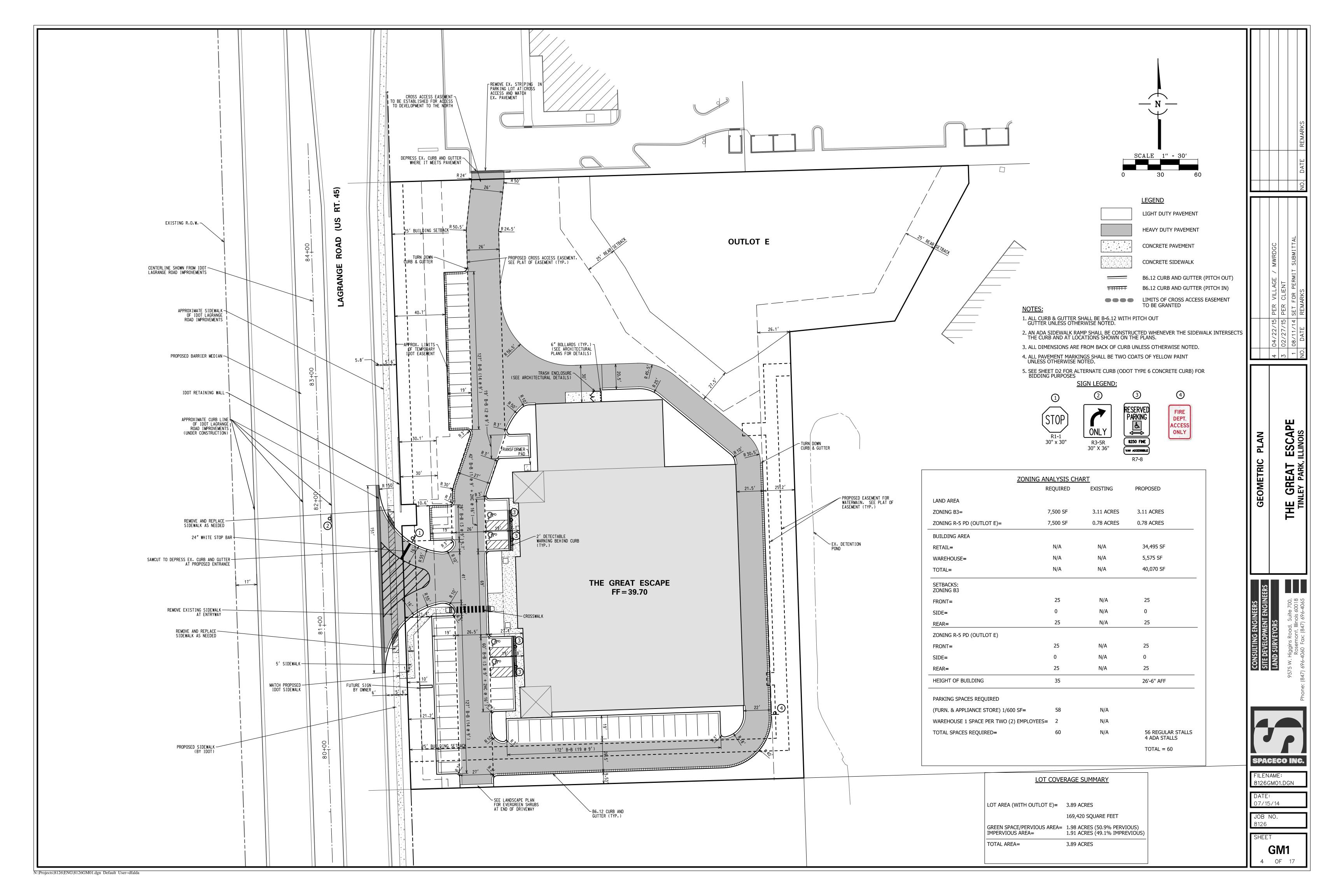
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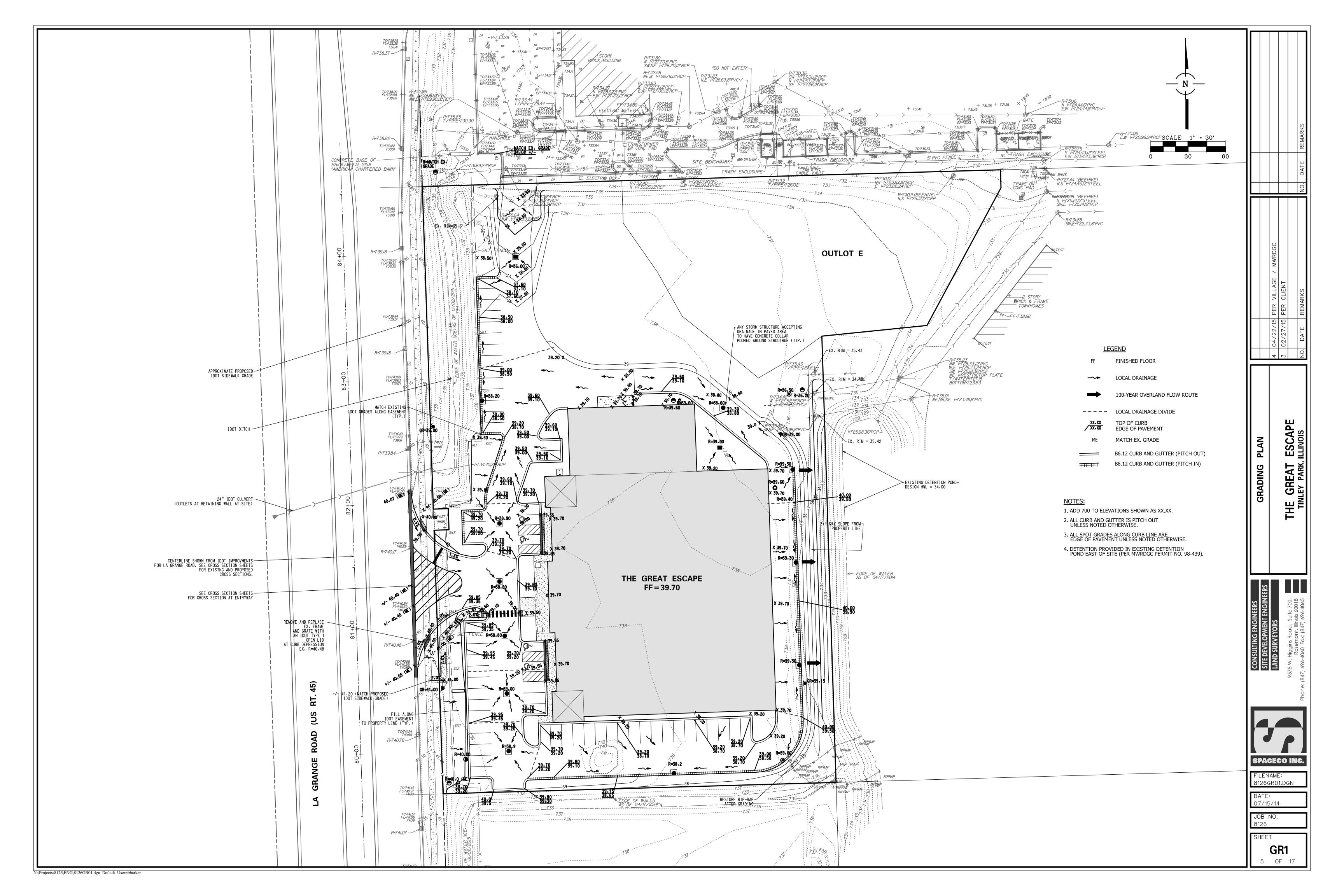
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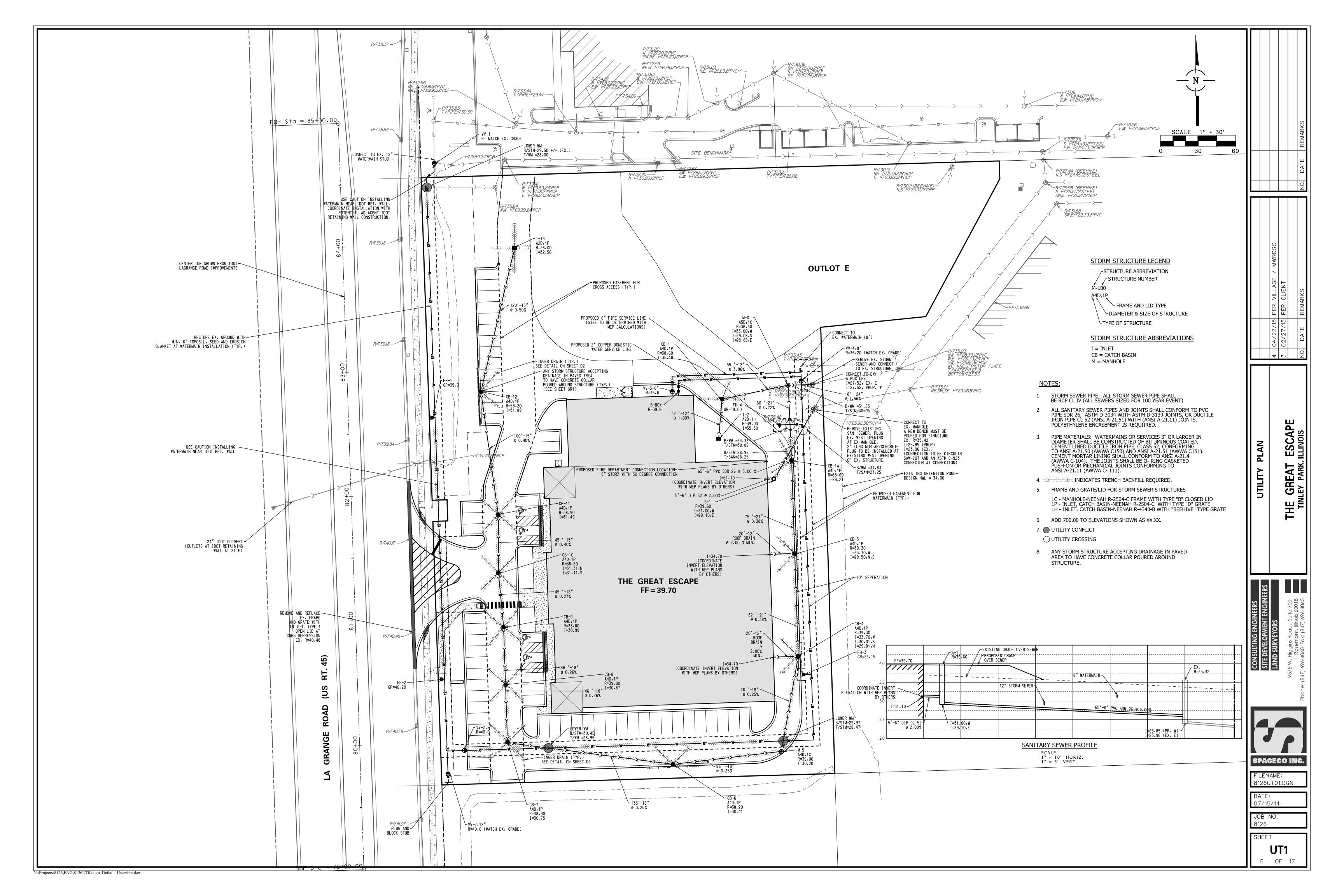
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 Storm Water Managemen This Soil Erosion & Sediment Control (SESC) Plan has been prepared to fulfill one of the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit No. ILR10_ Provided below is a description of measures that will be installed during the construction process to control SESC Plan should be maintained on site as an integral component of the Storm Water Pollution Prevention the pollutants in storm water discharges that will occur after the construction operations have been completed. Plan (SWPPP). The SWPPP, including the SESC Plan, should be amended whenever there is a change in design, The installation of these devices may be subject to Section 404 of the Clean Water Act. construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the Waters of the State and which has not otherwise been addressed in the SWPPP. The SWPPP, 1) The practices selected for implementation were determined on the basis of technical guidance contained in IEPA's Illinois Urban Manual, Federal, State, and/or Local Requirements. The storm water management shall also be amanded if it proves to be ineffective in eliminating or significantly minimizing pollutants, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with measures include: construction site activity. In addition, the SWPPP shall be amended to identify any new contractor and/or subcontractor that will implement a measure of the SWPPP. - storm sewers 1. SITE DESCRIPTION: Retail Site A. The following is a description of the nature of the construction activity: Retail building. B. The following is a description of the intended sequence of construction activities which will disturb 2) Velocity dissipation devices, such as rip-rap aprons at flared end sections or level spreaders, shall be placed soils for major portions of the construction site: at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a watercourse so that the natural, physical, and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics Describe proposed construction sequence, sample follows: present prior to the initiation of construction activities).) Install perimeter sediment control measures a) Selective vegetation removal for silt fence installation Solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other c) Stabilized construction entrance items will be collected and disposed of off site by the contractor. The contractor is responsible to acquire the permit) Clear and grub (as necessary: required for such disposal. Burning on site will not be permitted. No solid materials, including building materials, Strip topsoil, stockpile topsoil and grade site shall be discharged to Waters of the State, except as authorized by a Section 404 permit. All waste materials should be Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope) collected and stored in approved receptacles. No wastes should be placed in any location other than in the approved Install storm sewer, sanitary sewer, watermain and associated inlet & outlet protection containers appropriate for the materials being discarded. There should be no liquid wastes deposited into dumpsters or Temporarily stabilize all areas including lots that have reached mass grade other containers which may leak. Receptacles with deficiencies should be replaced as soon as possible and the appropriate clean-up procedure should take place, if necessary. Construction waste material is not to be buried on site. Waste Install buildings and grade individual lots disposal should comply with all Local, State, and Federal regulations.)) Permanently stabilize lots 10) Remove all temporary soil erosion and sediment control measures after the site is stabilized with vegetation On-site hazardous material storage should be minimized and stored in labeled, separate receptacles from non-hazardous waste. All hazardous waste should be disposed of in the manner specified by Local or State regulation or by the manufacturer. F. Concrete Waste Management Concrete waste or washout should not be allowed in the street or allowed to reach a storm water drainage system or C. The site has a total acreage of approximately 3.89 acres. Construction activity will disturb watercourse. When practicable, a sign should be posted at each location to identify the washout. To the extent approximately +/-2.6 acres of the site. practicable, concrete washout areas should be located a reasonable distance from a storm water drainage inlet or watercourse, and should be located at least 10 feet behind the curb, if the washout area is adjacent to a paved road. D. 1) An estimated runoff coefficient of the site after construction activities are completed is 0.90.

2) Existing data describing the soil or quality of any discharge from the site is included in Geis Companies, Soil Borings Report , The Great Escape, 9425 171st Street, Tinley Park, IL. A stabilized entrance that meets Illinois Urban Manual standards should be installed at each washout area. The containment facilities should be of sufficient volume to completely contain all liquid and concrete waste materials including enough capacity for anticipated levels of rainwater. The dried concrete waste material should be picked Refer to Sheets GR1, SE3 for a site plan indicating: up and disposed of properly when 66% capacity is reached. Hardened concrete can be properly recycled and used again on site (as approved by the Engineer) or hauled off site to an appropriate landfill) approximate slopes anticipated before and after major grading activities; locations where vehicles enter or exit the site and controls to minimize off-site sediment tracking; G. Concrete Cutting 4) areas of soil disturbance;) the location of major structural and nonstructural controls Concrete waste management should be implemented to contain and dispose of saw-cutting slurries. Concrete cutting should not take place during or immediately after a rainfall event. Waste generated from the location of areas where stabilization practices are expected to occur;) surface waters (including wetlands); and, concrete cutting should be cleaned-up and disposed into the concrete washout facility as described above.) locations where storm water is discharged to a surface water. H. Vehicle Storage and Maintenance F. 1) The name of the receiving water(s) is(are): Lake Teneyuque. 2) The name of the ultimate receiving water is: Des Plaines River. When not in use, construction vehicles should be stored in a designated area(s) outside of the 3) The extent of wetland acreage at the site is 0.00 acres. regulatory floodplain, away from any natural or created watercourse, pond, drainage-way or storm drain. Controls should be installed to minimize the potential of runoff from the storage area(s) from reaching storm G. Potential sources of pollution associated with this construction activity may include: drains or water courses. Vehicle maintenance (including both routine maintenance as well as on-site repairs) should be made within a designated area(s) to prevent the migration of mechanical fluids (oil, antifreeze, etc.) - sediment from disturbed soils into watercourses, wetlands or storm drains. Drip pans or absorbent pads should be used for all vehicle - portable sanitary stations and equipment maintenance activities that involve grease, oil, solvents, or other vehicle fluids. Construction fuel tanks vehicles should be inspected frequently to identify any leaks; leaks should be repaired immediately or the - staaina areas vehicle should be removed from site. Dispose of all used oil, antifreeze, solvents and other vehicle-related - waste containers chemicals in accordance with United States Environmental Protection Agency (USEPA) and IEPA chemical storage areas regulations and per Material Safety Data Sheet (MSDS) and/or manufacturer instructions. Contractors oil or other petroleum products should immediately report spills to the Primary Contact. - adhesives I. Material Storage and Good Housekeeping - solvents - detergents Materials and/or contaminants should be stored in a manner that minimizes the potential to discharge into fertilizers storm drains or watercourses. An on-site area should be designated for material delivery and storage. All -raw materials (e.g., bagged portland cement) materials kept on site should be stored in their original containers with legible labels, and if possible, under a - construction debris roof or other enclosure. Labels should be replaced if damaged or difficult to read. Bermed-off storage areas landscape waste are an acceptable control measure to prevent contamination of storm water. MSDS should be available for concrete and concrete trucks referencing clean-up procedures. Any release of chemicals/contaminants should be immediately cleaned up and disposed of properly. Contractors should immediately report all spills to the Primary Contact, who should notify the appropriate agencies, if needed. 2. CONTROLS To reduce the risks associated with hazardous materials on site, hazardous products should be This section of the SESC Plan addresses the various controls that should be implemented for each of the kept in original containers unless they are not re-sealable. The original labels and MSDS major construction activities described in the "Site Description" section. For each measure identified in the should be retained on site at all times. Hazardous materials and all other material on site SWPPP, the contractor(s) or subcontractor(s) that will implement the measure should be identified. All contractors should be stored in accordance with manufacturer or MSDS specifications. When disposing and subcontractors that are identified should be required to sign a copy of the certification statement from of hazardous materials, follow manufacturer or Local and State recommended methods. Part IV.F. of the ILR10 Permit (in accordance with Part VI.G. - Signatory Requirements, of the ILR10 Permit). All signed certification statements should be maintained in the SWPPP. The following good housekeeping practices should be followed on site during the construction A. Approved State or Local Plans An effort should be made to store only enough product required to do the job. The management practices, controls and other provisions contained in the SWPPP should be at least as protective as the requirements contained in the Illinois Environmental Protection Agency's (IEPA) and the United States All materials stored on site should be stored in a neat, orderly manner in their appropriate Department of Agriculture's Natural Resource Conservation Service Illinois Urban Manual, 2012. Requirements containers and adequately protected from the environment. specified in sediment and erosion control site plans or site permits or storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal Products should be kept in their original containers with the original manufacturer's label. of a Notice of Intent (NOI) to be authorized to discharge under the ILR10 permit, incorporated by reference and are enforceable under the ILR10 permit even if they are not specifically included in a SWPPP required under the \cdot Substances should not be mixed with one another unless recommended by the manufacturer. ILR10 permit. This provision does not apply to provisions of master plans, comprehensive plans, non-enforceable quidelines or technical guidance documents that are not identified in a specific plan or permit that is issued for the · Operations should be observed as necessary to ensure proper use and disposal of materials The soil erosion and sediment control measures for this site should meet the requirements of the following agencies: Whenever possible, all of a product should be used up before disposing of the container. Municipality (be specific) Manufacturer's recommendations for proper use and disposal should be followed. - County Agency and/or SWCD (be specific) J. Management of Portable Sanitary Stations - U.S. Army Corps of Engineers To the extent practicable, portable sanitary stations should be located in an area that does not B. Control Implementation Schedule drain to any protected natural areas, Waters of the State, or storm water structures and should be anchored to the ground to prevent from tipping over. Portable sanitary stations located on Best Management Practices will be implemented on an as-needed basis to protect water quality. Perimeter controls impervious surfaces should be placed on top of a secondary containment device, or be surrounded of the site should be installed prior to soil disturbance (excluding soil disturbance necessary to install the controls), by a control device (e.g., gravel-bag berm). The contractor should not create or allow unsanitary including demolition activities. Perimeter controls, including the silt fence, should be actively maintained until final conditions. Sanitary waste should be disposed of in accordance with applicable State and/or stabilization of those portions of the site upward of the perimeter control. Stabilized construction entrance(s) and Local regulations. sediment traps should be installed as described in the intended sequence of construction activities. The contractor is responsible for the adequate protection (including sediment control) of existing sewers and sewer structures during K. Spill Prevention and Clean-Up Procedures construction operations. As necessary, the appropriate sediment control measure should be installed prior to land disturbing activities. Manufacturer's recommended methods for spill clean-up should be available and site personnel should be made aware of the procedures and the location of the information and clean-up supplies. Materials Stabilization measures should be initiated where construction activities have temporarily or permanently ceased, in and equipment necessary for spill clean—up should be kept in the material storage area on site. accordance with Local and State requirements, as described below. Once construction activity in an area has Equipment and materials should include, but are not limited to, brooms, dust pans, mops, rags, gloves, permanently ceased, that area should be permanently stabilized. Temporary perimeter controls should be removed goggles, kitty litter, sand, sawdust and plastic and/or metal trash containers specifically for this purpose. after final stabilization of those portions of the site upward of the perimeter control. Discharges of a hazardous substance or oil caused by a spill (e.g., a spill of oil into a separate storm sewer C. Erosion and Sediment Controls or Waters of the State) are not authorized by the ILR10 permit. If a spill occurs, notify the Primary Contact immediately. The construction site should have the capacity to control, contain, and remove spills, if they The appropriate soil erosion and sediment controls should be implemented on site and should be modified to reflect occur. Spills should be cleaned up immediately (after discovery) in accordance with MSDS and should the current phase of construction. All temporary sediment and erosion control measures should be repaired or not be buried on site or washed into storm sewer drainage inlets, drainage-ways, or Waters of the State. replaced as soon as practicable to maintain NPDES compliance. Permittee or an authorized agent is responsible for inspecting all sediment and erosion control measures at a minimum of every 7 calendar days and within 24 hours, or Spills in excess of Federal Reportable Quantities (as established under 40 CFR Parts 110, 117, or 302), should one working day, of the end of a 0.5-inch (or greater) rain event. be reported to the National Response Center by calling (800) 424-8802. MSDS often include information on Federal Reportable Quantities for materials. Spills of toxic or hazardous materials should be reported to the appropriate State Unless otherwise indicated, all vegetative and structural erosion and sediment control practices should be installed to or Local government agency, as required. When cleaning up a spill, the area should be kept well ventilated and appropriat the Standard Practice. The contractor is responsible for the installation of any additional erosion and sediment control personal protective equipment should be used to minimize injury from contact with a hazardous substance. measures necessary to minimize erosion and sedimentation as determined by the Engineer or Primary Contact. In addition to the good housekeeping and other management practices discussed in the previous sections of these Notes, 1) Stabilization Practices - Areas that will not be paved or covered with non-erosive material should be stabilized the following minimum practices should be followed to reduce the risk of spills: using procedures in substantial conformance with the Illinois Urban Manual. This SESC Plan includes site-specific soil erosion and sediment control measures. Additional erosion controls should be implemented as necessary, as - On-site vehicles should be monitored for leaks and should receive regular preventative maintenance to reduce the determined by the Engineer or Primary Contact. The following temporary and permanent stabilization practices, at a minimum, are proposed: Petroleum products should be stored in tightly sealed and clearly labeled containers. Contractors should follow the manufacturer's recommendations for proper use, storage, and disposal of materials. – permanent seeding Excess materials should be disposed of according to the manufacturer's instructions or State and Local regulations, temporary seeding and should not be discharged to the storm sewer or waterbody. – erosion control blanket L. De-Watering Operations During de-watering/pumping operations, only uncontaminated water should be allowed to discharge to protected natural Site-specific scheduling of the implementation of these practices is included in the Soil Protection Chart. areas, Waters of the State, or to a storm sewer system (in accordance with Local permits). Inlet hoses should be placed A record of the dates when major grading activities occur, when construction activities cease on a in a stabilized sump pit or floated at the surface of the water in order to limit the amount of sediment intake. Pumping portion of the site, and when stabilization measures are initiated should be included in the SWPPP. operations may be discharged to a stabilized area that consists of an energy dissipating device (e.g., stone), sediment filter bag, or both. Adequate erosion controls should be used during de-watering operations as necessary. Stabilization of disturbed areas must be initiated within 1 working day of permanent or temporary cessation of earth Stabilized conveyance channels should be installed to direct water to the desired location as applicable activities and shall be completed as soon as possible but not later than 14 days from the initialization of stabilization Additional control measures may be installed at the outlet area at the discretion of the Primary Contact or Engineer. work in an area. Exceptions to these time frames are specified below. M. Off-Site Vehicle Tracking a. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable. The site should have one or more stabilized construction entrances in conformance with the Plan details. Stabilized construction entrance(s) should be installed to help reduce vehicle tracking of sediments. Streets should be b. On areas where construction activity has temporarily ceased and will resume after 14 days, a temporary swept as needed to reduce excess sediment, dirt, or stone tracked from the site. Maintenance may include stabilization method can be used. Temporary stabilization techniques and materials shall conform to the SWPPP. top dressing the stabilized entrance with additional stone and removing top layers of stone and sediment, as needed. Vehicles hauling erodible material to and from the construction site should be covered with a tarp.) Structural Practices - Provided below is a description of structural practices that should be implemented, to the degree attainable to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of N. Topsoil Stockpile Management pollutants from exposed areas of the site. Structural practices should be placed on upland soils to the degree practicable. The installation of the following devices may be subject to Section 404 of the Clean Water Act: If topsoil is to be stockpiled at the site, select a location so that it will not erode, block drainage, or

interfere with work on site. Topsoil stockpiles should not be located in the 100-year floodplain or

designated buffer protecting Waters of the State. During construction of the project, soil stockpiles

should be stabilized or protected with sediment trapping measures. Perimeter controls, such as silt fence, should be placed around the stockpile immediately. Stabilization of the stockpile should be

completed if the stockpile is to remain undisturbed for longer than fourteen days.

Dust Control Oust control should be implemented on site as necessary. Repetitive treatment should be applied as needed to accomplish control when temporary dust control measures are used. A water truck should be present on site (or available) for sprinkling/irrigation to limit the amount of dust leaving the site. Watering should be applied daily (or more frequently) to be effective. Caution should be used not to overwater, as that may cause If field observations indicate that additional protection from wind erosion (in addition to, or in place of watering) is necessary, alternative dust suppressant controls should be implemented at the discretion and approval of the Engineer and/or Primary Contact. Street cleaning should also be used as necessary to control dust. Paved areas that have soil on them from the construction site should be cleaned as needed, utilizing a street sweeper or bucket-type endloader or scraper at the direction of the Engineer and/or Primary Contact. aintenance of the controls incorporated into this project should be performed as needed to assure their continued ffectiveness. This includes prompt and effective repair and/or replacement of deficient control measures. The following is a description of procedures that should be used to maintain, in good and effective operating condition, erosion and sediment control measures and other protective measures identified in the SESC Plan and Standard Specifications. Dust control: When temporary dust control measures are used, repetitive treatment should be applied as needed to ediment filter bags: Sediment filter bags should be installed on pump outlet hoses that discharge off site or to sensitive on-site areas, and should be placed in an area that allows for the bag to be removed without producing a sediment discharge. The bags should be inspected frequently and repaired or replaced as needed. It fence: Silt fences should be inspected regularly for undercutting where the fence meets the ground, overtopping, and tears along the length of the fence. Deficiencies should be repaired immediately. Remove accumulated sediments from the fence base when the sediment reaches one-half the fence height. During final stabilization, properly dispose of any sediment that has accumulated on the silt fence. Alternative sediment control measures should be considered for areas where silt fence continually fails. Stabilized construction entrance: The stabilized construction entrances should be maintained to prevent tracking of sediment onto public streets. Maintenance includes top dressing with additional stone and removing top layers of stone and sediment. The sediment tracked onto the public right-of-way should be removed immediately. emporary sediment traps: Temporary sediment traps should be inspected after each period of significant rainfall Remove sediment and restore the trap to its original dimensions when the sediment has accumulated to one-half the design depth of the permanent pool. Place the sediment that is removed in a designated disposal area. Check the structure for damage from erosion or piping. After all sediment-producing areas have been permanently stabilized, remove the structure and all unstable sediment. Grade the area to blend with the adjoining areas and stabilize ne Permittee (or their authorized representative) will be responsible for conducting site inspections n compliance with the ILR10 NPDES Permit. After each inspection, a report should be prepared by the qualified personnel who performed the inspection. The inspection report should be maintained on site Inspections should be conducted at least once every seven calendar days and within 24 hours or by the end of the following work day, of the end of a storm event that is 0.5 inches or greater, or equivalent snowfall. nspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activites are conducted, or if there is $0.5^{''}$ or greater rain event, or a discharge due to snowmelt occurs. Each inspection should include the following components: A. Disturbed areas and areas used for the storage of materials that are exposed to precipitation should be inspected for evidence of, or the potential for, pollutants entering the drainage system. he erosion and sediment control measures identified in the SWPPP should be observed to ensure that they have been installed and are operating correctly. Where discharge points are accessible, they should be inspected to ascertain whether erosion control measures are effective in preventing ignificant impacts to the receiving waters. Locations where vehicles enter or exit the site should be nspected for off-site sediment tracking. All pumping operations and other potential non-storm water discharge sources should also be inspected. Based on the results of the inspection, the description of potential pollutant sources identified, and the pollution prevention measures described in the SWPPP should be revised, as appropriate, as soon as practicable after the inspection. The modifications, if any, shall provide for timely implementation f any changes to the SWPPP within 7 calendar days following the inspection. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making he inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and actions taken in accordance with paragraph B, above should be made and retained as part of the SWPPP for at least three years from the date that permit coverage expires or is terminated. he report shall be signed in accordance with Part VI.G. (Signatory Requirements) of the ILR10 NPDES Permit. The Permittee shall notify the appropriate agency field operations section office by e-mail at pa.swnoncomp@illinois.gov , telephone or fax within 24 hours of any incidence of noncompliance for any iolation of the storm water pollution prevention plan observed during any inspection conducted or for <u>plation of any condition</u> of this permit. The Permittee should complete and submit within 5 days an ncidence of Non-Compliance" (ION) report for any violation of the SWPPP observed during an inspection conducted, including those not required by the SWPPP. Submission should be on forms provided by IEPA and include specific information on the cause of non-compliance, actions which were taken to prevent any urther causes of non-compliance, and a statement detailing any environmental impact, which may have resulted · All reports of non-compliance shall be signed by a responsible authority as defined in Part VI.G. Signatory Requirements). of the ILR10 NPDES Permit. Atter the initial contact has been made within the appropriate agency tield operations section office II reports of non-compliance shall be mailed to IEPA at the following address: Ilinois Environmental Protection Agency ivision of Water Pollution Control Compliance Assurance Section 021 North Grand Avenue East Post Office Box 19276 Springfield, Illinois 62794-9276 . All SWPPP written inspection reports shall also be sent to the village of Tinley Park Building Department. NON-STORM WATER DISCHARGES Except for flows from fire fighting activities, possible sources of non-storm water that may be combined with storm water discharges associated with the proposed activity, are described below: Water used to wash vehicles where detergents are not used Water used to control dust Potable water sources including uncontaminated waterline flushinas Landscape irrigation drainages Routine external building washdown which does not use detergents Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed) and where detergents have not been used. Uncontaminated air conditioning condensate Uncontaminated ground water Foundation or footing drains where flows are not contaminated with process materials such as solvents PROHIBITED NON-STORMWATER DISCHARGES Concrete and wastewater from washout of concrete (unless managed by an appropriate control) Wastewater from washout and cleanout of stucco, paint Form release oils Curing compounds and other construction materials Fuels, oils, or other pollutants used in vehicle or equipment operation and maintenance Soaps, solvents, or detergents Toxic or hazardous substances from a spill or other release Any other pollutant that could cause or tend to cause water pollution ollution prevention measures should be implemented for non—storm water components of the discharge.

PERMANENT SEEDING SEEDING SODDING MULCHING A KENTUCKY BLUEGRASS 90 LBS/ACRI C SPRING DATS 100 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS D WHEAT OR CEREAL RYE 30 LBS/ACRE 150 LBS/ACRE. B KENTUCKY BLUEGRASS 135 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 45 LBS/ACRE + STRAW MULCH 2 TONS/ACRE. E SOD F STRAW MULCH 2 TONS/ACRE. * IRRIGATION NEEDED DURING JUNE AND JULY. ** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD. SOIL PROTECTION CHART [뇬[뇬] CONTRACTOR CERTIFICATION CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (JLR10)
THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION. PROJECT: THE GREAT ESCAPE TELEPHONE NUMBER CONTRACTOR SIGNATURE EA SEDI PRINTED NAME & TITLE NAME OF CONTRACTING FIRM STREET ADDRESS CITY, STATE, ZIP CODE TRADE/ RESPONSIBILITIES: ALL CONTRACTORS PERFORMING WORK ON THIS SITE ARE REQUIRED TO SIGN A CONTRACTOR CERTIFICATION STATEMENT AS ILLUSTRATED ABOVE. THE SIGNED STATEMENTS WILL BE MAINTAINED ON THE SITE WITH THE OWNER SWPPP CERTIFICATION PROJECT: THE GREAT ESCAPE PERMIT #: ILR10 _ CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE TH QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION 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 FOR KNOWING VIOLATIONS. SIGNATURE OF OWNER PRINTED NAME OF OWNER SPACECO INC THE CERTIFICATION ILLUSTRATED ABOVE SHALL BE SIGNED BY THE OWNER LISTED ON THE NOTICE OF INTENT ILENAME: IN ACCORDANCE WITH PART VI.G. OF THE ILR10 NPDES PERMIT. THE SIGNED STATEMENT SHALL BE MAINTAINED 8126SE01.DGN ON THE SITE WITH THE SWPPP. 7/15/14

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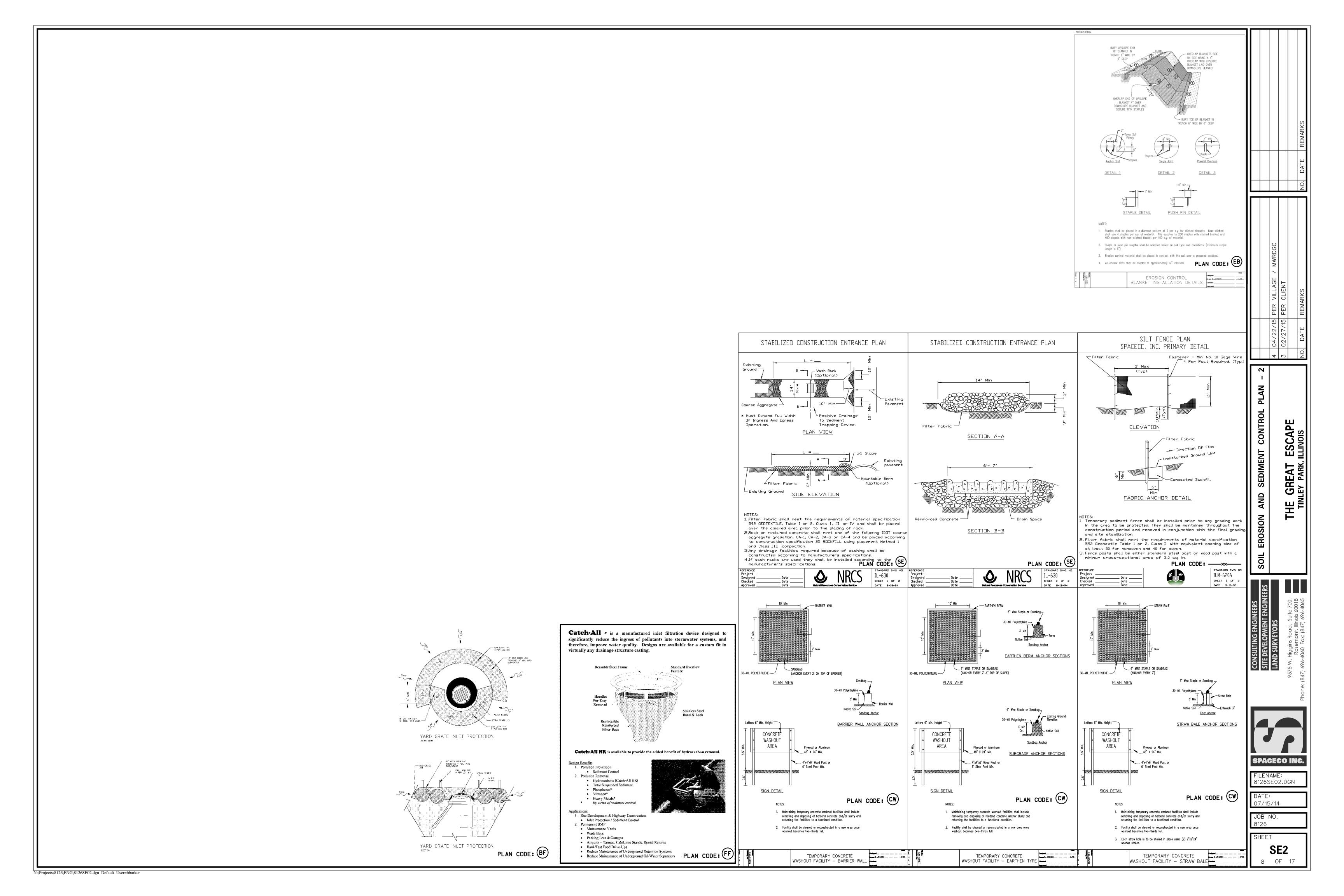
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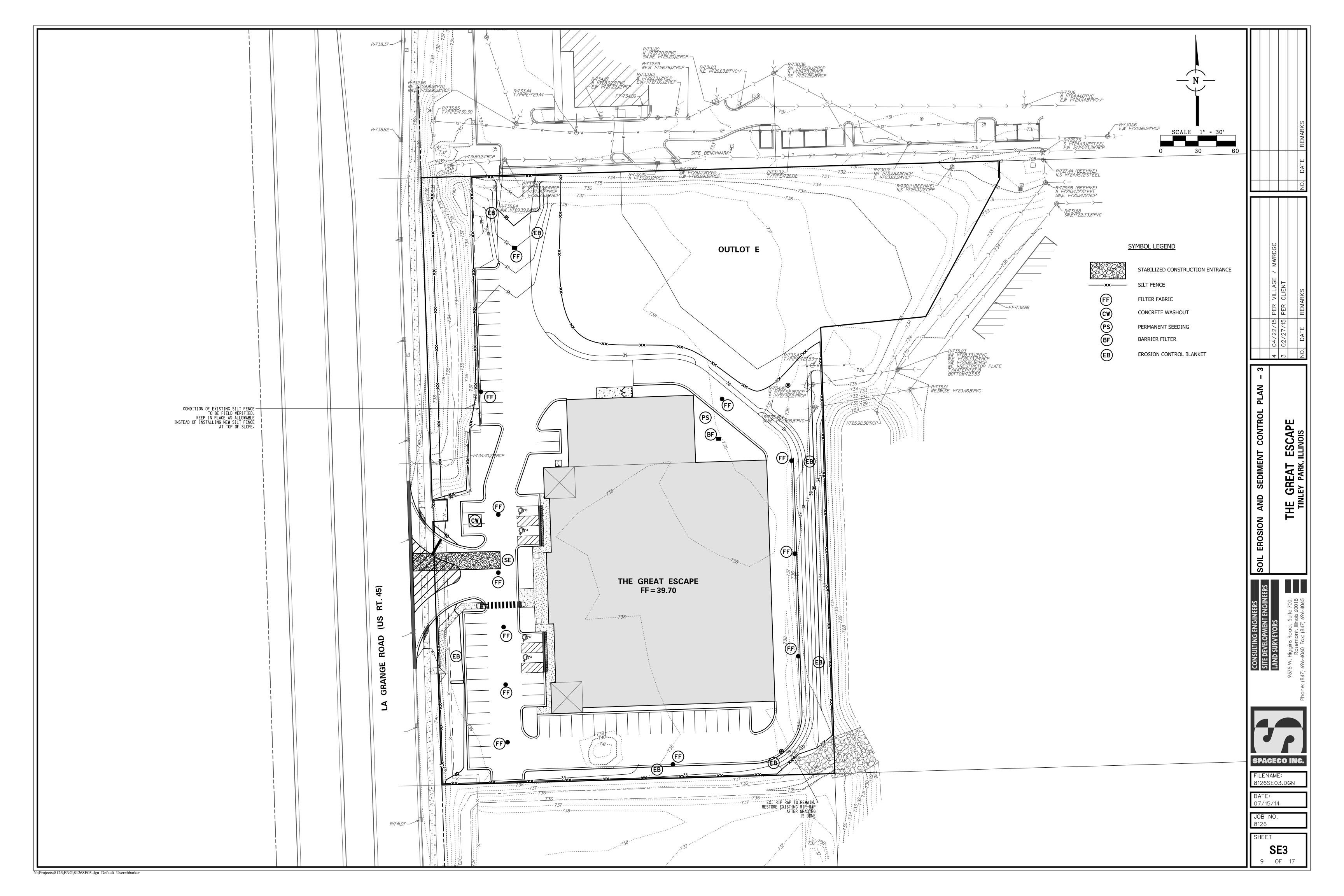
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- stabilized construction entrance





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

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

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

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

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

F. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE "SOIL EROSION AND SEDIMENTATION CONTROL MEASURES". THE INITIAL ESTABLISHMENT OF EROSION CONTROL PROCEDURES AND THE PLACEMENT OF SILT AND FILTER FENCING, ETC. TO PROTECT ADJACENT PROPERTY, WETLANDS, ETC. SHALL OCCUR BEFORE MASS GRADING

G. PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, THE CONTRACTOR SHALL ERECT A "SNOW FENCE" AROUND ANY TREE DESIGNATED TO BE PRESERVED. SAID FENCE SHALL BE PLACED IN A CIRCLE CENTERED AROUND THE TREE, THE DIAMETER OF WHICH SHALL BE SUCH THAT THE ENTIRE DRIP ZONE (EXTENT OF FURTHEST EXTENDING BRANCHES) SHALL BE WITHIN THE FENCE LIMITS. THE EXISTING GRADE WITHIN THE FENCED AREA SHALL

H. EXCESS MATERIALS, IF NOT UTILIZED AS FILL SHALL BE COMPLETELY REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED OF OFF-SITE BY THE CONTRACTOR. I. GEOTEXTILE FABRIC, IF AUTHORIZED BY THE OWNER, SHALL BE "SUPAC 8NP", "MIRAFI 160" OR EQUAL, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

2. TOPSOIL EXCAVATION INCLUDES:

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

B. PLACEMENT OF THE EXCAVATED MATERIAL IN OWNER DESIGNATED AREAS FOR FUTURE USE WITHIN AREAS TO BE LANDSCAPED, AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL. PROVIDE NECESSARY EROSION CONTROL MEASURES FOR STOCKPILE. C. TOPSOIL STOCKPILED FOR RESPREAD SHALL BE FREE OF CLAY AND SHALL NOT CONTAIN ANY OF THE TRANSITIONAL MATERIAL BETWEEN THE TOPSOIL AND CLAY. THE TRANSITIONAL MATERIAL SHALL BE USED IN NON-STRUCTURAL FILL AREAS OR DISPOSED

D. TOPSOIL RESPREAD SHALL INCLUDE HAULING AND SPEADING 6" OF TOPSOIL OVER AREAS TO BE LANDSCAPED WHERE SHOWN ON THE PLANS OR DIRECTED BY THE OWNER. MODERATE COMPACTION IS REQUIRED IN NON-STRUCTURAL FILL AREAS.

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

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

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

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

4. UNSUITABLE MATERIAL

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

5. MISCELLANEOUS THE CONTRACTOR SHALL:

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

C. PROVIDE WATER TO ADD TO DRY MATERIAL IN ORDER TO ADJUST THE MOISTURE CONTENT FOR THE PURPOSE OF ACHIEVING THE SPECIFIED COMPACTION. D. BACKFILL THE CURB AND GUTTER AFTER ITS CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE MATERIAL.

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

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

C. THE SITE PARKING LOT WILL REQUIRE UNDERCUTTING OF UNSUITABLE MATERIAL AND THE DEVELOPER WILL PROVIDE COPIES OF THE WRITTEN REPORTS FROM HIS SOILS ENGINEER TO DOCUMENT THE ENGINEER'S APPROVAL.

PAVING NOTES

A. PAVING WORK INCLUDES FINAL SUBGRADE SHAPING, PREPARATION AND COMPACTION; PLACEMENT OF SUB-BASE OR BASE COURSE MATERIALS; BITUMINOUS BINDER AND/OR SURFACE COURSES; FORMING, FINISHING AND CURING CONCRETE PAVEMENT, CURBS AND WALKS; AND FINAL CLEAN-UP AND ALL RELATED WORK.

B. COMPACTION REQUIREMENTS: [REFERENCE ASTM D-1557 (MODIFIED PROCTOR)] SUB-GRADE = 93%; SUB-BASE = 93%; AGGREGATE BASE COURSE = 95%; BITUMINOUS COURSES =

95% OF MAXIMUM DENSITY PER (SSRBC) ARTICLE 406.16. C. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE PROPER BARRICADING, WARNING DEVICES AND THE SAFE MANAGEMENT OF TRAFFIC WITHIN THE AREA OF CONSTRUCTION. ALL SUCH DEVICES AND THEIR INSTALLATION SHALL CONFORM TO THE ILLINOIS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AND IN

SUB-GRADE PREPARATION

A. EARTHWORK FOR PROPOSED PAVEMENT SUBGRADE SHALL BE FINISHED TO WITHIN 0.1 FOOT, PLUS OR MINUS, OF PLAN ELEVATION. THE CONTRACTOR SHALL SATISFY HIMSELF THAT THE SUBGRADE HAS BEEN PROPERLY PREPARED AND THAT THE FINISH TOP SUBGRADE ELEVATION HAS BEEN GRADED WITHIN TOLERANCES ALLOWED IN THESE SPECIFICATIONS. UNLESS THE CONTRACTOR ADVISES THE OWNER AND ENGINEER IN WRITING PRIOR TO FINE GRADING FOR BASE COURSE CONSTRUCTION, IT IS UNDERSTOOD THAT HE HAS APPROVED AND ACCEPTS THE RESPONSIBILITY FOR THE SUBGRADE.

B. PRIOR TO THE PLACEMENT OF THE BASE COURSE, THE SUBGRADE MUST BE PROOF ROLLED AND INSPECTED FOR UNSUITABLE MATERIALS AND/OR EXCESSIVE MOVEMENT. IF UNSUITABLE SUBGRADE IS ENCOUNTERED, IT SHALL BE CORRECTED IN A MANNER APPROVED BY THE OWNER OR HIS REPRESENTATIVE. THIS MAY INCLUDE ONE OR MORE OF

SCARIFY DISC AND AERATE.
REMOVE AND REPLACE WITH STRUCTURAL CLAY FILL.
REMOVE AND REPLACE WITH GRANULAR MATERIAL.

MAXIMUM DEFLECTION ALLOWED IN ISOLATED AREAS MAY BE $^{1}\prime_4{}''$ IF NO DEFLECTION OCCURS OVER THE MAJORITY OF THE AREA.

C. PRIOR TO THE CONSTRUCTION OF THE CURB AND GUTTER AND THE PLACEMENT OF THE BASE MATERIAL, THE PAVEMENT AREA SHALL BE FINE GRADED TO WITHIN 0.04 FEET (1/2") OF FINAL SUBGRADE ELEVATION, TO A POINT TWO (2) FEET BEYOND THE BACK OF CURB, SO AS TO INSURE THE PROPER THICKNESS OF PAVEMENT COURSES, NO CLAIMS FOR EXCESS QUANTITY OF BASE MATERIALS DUE TO IMPROPER SUBGRADE PREPARATION WILL BE

PRIOR TO PLACEMENT OF THE BASE COURSE, THE SUBGRADE MUST BE APPROVED BY THE MUNICIPAL ENGINEER.

CONCRETE WORK

A. ALL EXTERIOR CONCRETE SHALL BE PORTLAND CEMENT CONCRETE CLASS SI OR PV PER (SSRBC) SECTION 1020.04 WITH AIR ENTRAINMENT OF NOT LESS THAN FIVE (5%) OR MORE THAN EIGHT (8%) PERCENT. CONCRETE SHALL BE A MINIMUM OF SIX (6) BAG MIX AND SHALL DEVELOP A MINIMUM OF 3.500 PSI COMPRESSIVE STRENGTH OF FOURTEEN (14) DAYS. ALL CONCRETE SHALL BE BROOM FINISHED PERPENDICULAR TO THE DIRECTION OF TRAVEL.

B. CONCRETE CURB AND/OR COMBINATION CURB AND GUTTER SHALL BE OF THE TYPE SHOWN ON THE PLANS. THE CONTRACTOR IS CAUTIONED TO REFER TO THE CONSTRUCTION STANDARDS AND THE PAVEMENT CROSS-SECTION TO DETERMINE THE GUTTER FLAG THICKNESS AND THE AGGREGATE BASE COURSE THICKNESS BENEATH THE CURB AND GUTTER. PREMOLDED FIBER EXPANSION JOINTS, WITH TWO 3/4" X 18" EPOXY COATED STEEL DOWEL BARS, SHALL BE INSTALLED AT SIXTY (60) FOOT INTERVALS AND AT ALL PC'S, PT'S AND CURB RETURNS. ALTERNATE ENDS OF THE DOWEL BARS SHALL BE GREASED AND FITTED WITH METAL EXPANSION TUBES. SAWED OR FORMED CONTRACTION JOINTS SHALL BE PROVIDED AT NO GREATER THAN FIFTEEN (15) FOOT INTERVALS BETWEEN EXPANSION JOINTS. SAWED JOINTS SHALL BE FILLED WITH JOINT FILLER. NO HONEY-COMBING OF THE CURB AND GUTTER WILL BE ACCEPTED.

C. CURBS SHALL BE DEPRESSED AT LOCATIONS WHERE PUBLIC WALKS/PEDESTRIAN PATHS INTERSECT CURB LINES, AND OTHER LOCATIONS AS DIRECTED, FOR THE PURPOSE OF PROVIDING ACCESSIBILITY. (SEE CONSTRUCTION STANDARDS FOR DETAIL). BARRIER CURB SHALL ALSO BE DEPRESSED AT DRIVEWAY LOCATIONS.

D. THE CURBS SHALL BE BACKFILLED AFTER THEIR CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE. THE CONTRACTION JOINT FOR THE CURB AND GUTTER SHALL BE SEALED WITHIN

F. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE SCORED JOINTS AT 5 FOOT INTERVALS AND 1" PREMOLDED FIBER EXPANSION JOINTS AT 45 FOOT INTERVALS, AND ADJACENT TO CONCRETE CURBS, DRIVEWAYS, FOUNDATIONS, ETC.

G. CONCRETE DRIVEWAY APRONS SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE 6" X 6" NO. 6 WELDED WIRE MESH IN [ALL] [COMMERCIAL] DRIVEWAYS. PROVIDE 1" PREMOLDED FIBER EXPANSION JOINT ADJACENT TO CURBS AND CONCRETE SIDEWALKS. PROVIDE SAWED OR FORMED CONTRACTION JOINT AT MID-POINT AND 15 FOOT MAXIMUM.

H. STANDARD REINFORCED CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. SAWED OR FORMED CONTRACTION EXPANSION JOINTS SHALL BE AS SHOWN ON THE PLANS.

I. CONCRETE CURING AND PROTECTION SHALL BE IN ACCORDANCE WITH (SSRBC) - METHOD A, B, OR C. TWO (2) COATS OF BOILED LINSEED OIL IN CONFORMANCE WITH (SSRBC) SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES. J. THE COST OF AGGREGATE BASE OR SUB-BASE UNDER CONCRETE WORK SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE CONCRETE ITEM.

A. THE PAVEMENT MATERIALS FOR BITUMINOUS STREETS, PARKING LOTS, DRIVEWAYS, SIDEWALKS AND BIKE PATHS SHALL BE AS DETAILED ON THE PLANS, UNLESS OTHERWISE SHOWN ON THE PLANS, THE FLEXIBLE PAVEMENTS SHALL CONSIST OF AGGREGATE BASE COURSE, TYPE B, (OR BAM IF SELECTED BY THE OWNER); BITUMINOUS CONCRETE BINDER COURSE, MIXTURE B; AND BITUMINOUS CONCRETE SURFACE COURSE, CLASS 1, MIXTURE D, TYPE 2; OF THE THICKNESS AND MATERIALS SPECIFIED ON THE PLANS, THICKNESSES SPECIFIED SHALL BE CONSIDERED TO BE THE MINIMUM COMPACTED THICKNESS.

SPECIFIED SHALL BE CONSIDERED TO BE THE MINIMUM COMPACTED THICKNESS. B. ALL TRAFFIC SHALL BE KEPT OFF THE COMPLETED AGGREGATE BASE UNTIL THE BINDER COURSE IS LAID. THE AGGREGATE BASE SHALL BE UNIFORMLY PRIME COATED AT A RATE OF 0.4 TO 0.5 GALLONS PER SQUARE YARD PRIOR TO PLACING THE BINDER COURSE. PRIME COAT MATERIALS SHALL BE BITUMINOUS M.C. - 30.

C. PRIOR TO PLACEMENT OF THE SURFACE COURSE, THE BINDER COURSE SHALL BE CLEANED, AND TACK COATED IF DUSTY OR DIRTY. ALL DAMAGED AREAS IN THE BINDER, BASE OR CURB SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER PRIOR TO LAYING THE SURFACE COURSE. THE CONTRACTOR SHALL PROVIDE WHATEVER EQUIPMENT AND MANPOWER NECESSARY, INCLUDING THE USE OF POWER BROOMS IF REQUIRED BY THE OWNER, TO PREPARE THE PAVEMENT FOR APPLICATION OF THE SURFACE COURSE. THE TACK COAT SHALL BE UNIFORMLY APPLIED TO THE BINDER COURSE AT A RATE OF 0.05 TO 0.10 GALLONS PER SQUARE YARD. TACK COAT SHALL BE AS SPECIFIED IN (SSRBC) SECTION 406.02.

SEAMS IN BAM, BINDER AND SURFACE COURSE SHALL BE STAGGERED A MINIMUM OF 6". FOR NEW STREETS, THE CONTRACTOR SHALL PERMIT THE BITUMINOUS CONCRETE BINDER COURSE TO WEATHER ONE (1) WINTER SEASON PRIOR TO THE INSTALLATION OF THE BITUMINOUS CONCRETE SUBPACE COURSE UNLESS OTHERWISE SPECIFIED BY THE

TESTING AND FINAL ACCEPTANCE: MATERIAL TESTING

A. THE CONTRACTOR SHALL FOLLOW THE QUALITY CONTROL TESTING PROGRAM FOR CONCRETE AND PAVEMENT MATERIALS ESTABLISHED BY THE OWNER AND/OR

B. WHEN REQUESTED BY THE OWNER, TEST RESULTS AND DOCUMENTATION FOR THE CONCRETE, BASE COURSE, BITUMINOUS CONCRETE BINDER, AND/OR SURFACE COURSE, SHALL BE SUBMITTED FOR VERIFICATION.

C. PRIOR TO PLACEMENT OF THE BITUMINOUS CONCRETE SURFACE COURSE, THE CONTRACTOR, WHEN REQUIRED BY THE OWNER OR MUNICIPALITY, SHALL OBTAIN SPECIMENS OF THE BINDER COURSE WITH A CORE DRILL WHERE DIRECTED, FOR THE

D. WHEN REQUIRED BY THE OWNER OR MUNICIPALITY, THE CONTRACTOR SHALL OBTAIN SPECIMENS OF THE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT STRUCTURE WITH A CORE DRILL WHERE DIRECTED, IN ORDER TO CONFIRM THE PLAN THICKNESS. DEFICIENCIES IN THICKNESS SHALL BE ADJUSTED FOR BY THE METHOD DESCRIBED IN (SSRBC), ART. 407.10.

E. FINAL ACCEPTANCE OF THE TOTAL PAVEMENT INSTALLATION SHALL BE SUBJECT TO THE TESTING AND CHECKING REQUIREMENTS CITED ABOVE.

SANITARY SEWER NOTES

1. ALL SANITARY SEWER PIPES AND JOINTS SHALL CONFORM TO PVC PIPE SDR 26, ASTM D-3034 WITH ASTM D-3139 JOINTS, OR DUCTILE IRON PIPE CL 52 (ANSI A-21.51) WITH (ANSI A-21.11) JOINTS. 2. "BAND-SEAL" OR SIMILAR FLEXIBLE TYPE COUPLINGS SHALL BE USED WHEN CONNECTING SEWER PIPES OF DISSIMILAR MATERIALS.

3. ALL SANITARY SEWER CONSTRUCTION REQUIRES CRUSHED STONE BEDDING 1/4" TO 1" IN SIZE, (CA11) WITH A MINIMUM THICKNESS EQUAL TO 1/4 THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4") INCHES. BEDDING SHALL EXTEND A MINIMUM OF 12" ABOVE TOP OF PVC, ABS, OR HDPE PIPES, BEDDING SHALL BE CLASS C IN ACCORDANCE WITH ASTM C12 FOR RIGID PIPE AND TYPE IA IN ACCORDANCE WITH ASTM C2321-89 FOR FLEXIBLE PIPE. 4. ALL UNSUITABLE MATERIAL SHALL BE REMOVED BELOW THE PROPOSED SANITARY SEWER AND REPLACED WITH COMPACTED CA-11 OR CA-13 CRUSHED GRAVEL OR STONE.

5. ALL TRENCHES LOCATED UNDER A LINE AT 1:1 SLOPE FROM THE PAVEMENTS, ROADWAYS, IDEWALKS, AND/OR WHERE SHOWN ON THE PLANS, SHALL BE BACKEILLED WITH SELEC GRANULAR BACKFILL (CA-7) AND THOROUGHLY MECHANICALLY COMPACTED IN 9" THICK

(LOOSE MEASUREMENT) LAYERS. JETTING WITH WATER IS NOT PERMITTED. ALL SANITARY SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN 7. ALL FLOOR DRAINS SHALL CONNECT TO THE SANITARY SEWER.

8. CONNECTIONS TO EXISTING SANITARY SEWER SYSTEM SHALL NOT BE DONE UNTIL AUTHORIZED BY THE MUNICIPALITY. WATERMAINS SHALL BE SEPARATED FROM SANITARY SEWERS AND STORM SEWERS IN ACCORDANCE WITH IEPA REQUIREMENTS AS SPECIFIED IN "WATER MAIN" SECTION.

10. NO WATER LINE SHALL BE PLACED IN THE SAME TRENCH AS A SEWER LINE EXCEPT UNDER SPECIAL CIRCUMSTANCES AND THEN ONLY UNDER THE FOLLOWING RULES: PERMISSION SHALL BE OBTAINED FROM THE MUNICIPAL ENGINEERING DEPARTMENT IN

B. THE BOTTOM OF A WATER LINE SHALL BE INSTALLED ON A SHELF A MINIMUM OF 18" ABOVE THE TOP OF THE SEWER AND 18" HORIZONTALLY AWAY FROM THE EDGE OF THE

11. MANHOLES: SANITARY SEWER MANHOLES SHALL BE 4'-0" I.D. PRECAST CONCRETE SECTIONS CONFORMING TO ASTM D-478 WITH "O" RING JOINTS, IN ACCORDANCE WITH MUNICIPAL REGULATIONS, AND HAVE AN ECCENTRIC CONE INSTALLED TO LINE UP WITH THE MANHOLE STEPS. ALL MANHOLE STEPS SHALL BE AT 16" O.C. SIMILAR TO

ALL PIPE CONNECTION OPENINGS SHALL BE PRECAST WITH RESILIENT RUBBER WATER TIGHT SLEEVES. THE BOTTOM OF MANHOLE SHALL HAVE A CONCRETE BENCH POURED TO FACILITATE

12. FRAMES AND LIDS: ALL SANITARY SEWER MANHOLE FRAMES AND LIDS
SHALL BE AS NOTED IN THE DETAILS. THE LIDS SHALL HAVE RECESSED (CONCEALED) PICK
HOLE AND BE SELF SEALING WITH AN "O" RING GASKET PER ASTM C-923. THE LIDS SHALL HAVE
THE WORDS "SANITARY - TINLEY PARK" EMBOSSED ON THE SURFACE. THE JOINTS BETWEEN FRAME AND
CONCRETE SECTION SHALL BE SEALED WITH A BUTYL ROPE. ALL MANHOLES LOCATED WITHIN THE FLOODPLAIN
MUST HAVE WATERTIGHT, BOLTED DOWN LIDS.

A MAXIMUM OF TWELVE (12) INCHES OF ADJUSTING RINGS SHALL BE USED TO ADJUST FRAME ELEVATIONS. RINGS SHALL BE RUBBER "INFRA-RISER" OR APPROVED EQUAL AND SHALL BE SEALED TOGETHER WITH BUTYL ROPE. ALL MANHOLES LOCATED WITHIN THE FLOODPLAIN MUST HAVE WATERTIGHT, BOLTED DOWN LIDS.

14. DROP MANHOLE ASSEMBLIES: DROP MANHOLE ASSEMBLIES SHALL BE PROVIDED AT THE JUNCTION OF SANITARY SEWERS WHERE THE DIFFERENCE IN INVERT GRADES EXCEEDS TWO FEET (2') OR AS SHOWN ON THE PLANS. THE ENTIRE DROP ASSEMBLY SHALL BE CAST IN CONCRETE MONOLITHICALLY WITH THE MANHOLE BARREL SECTION. 15. CLEANING: ALL MANHOLES AND PIPES SHALL BE THOROUGHLY CLEANED OF DIRT AND DEBRIS, AND ALL VISIBLE LEAKAGE ELIMINATED, BEFORE FINAL INSPECTION AND ACCEPTANCE. 16. TESTING: DEFLECTION AND LEAKAGE TESTING WILL BE REQUIRED. THE PROCEDURE AND ALLOWABLE TESTING LIMITS SHALL BE AS SPECIFIED IN THE SECTION 31-1.11 OF "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", OR MUNICIPAL CODES. 17. TESTING THE ALIGNMENT/STRAIGHTNESS SHALL BE IN ACCORDANCE WITH MUNICIPAL CODE. AIR TESTING IS REQUIRED. MANDRELL TESTING IS REQUIRED (APPROX. 10%)

18. TELEVISING: ALL SANITARY SEWERS SHALL BE TELEVISED AND A COPY OF THE DVD OR HARD DRIVE AND A WRITTEN REPORT SHALL BE SUBMITTED AND REVIEWED BY THE OWNER OR MUNICIPALITY BEFORE FINAL ACCEPTANCE. THE REPORT SHALL INCLUDE STUB LOCATION AS WELL AS A DESCRIPTION OF ALL DEFECTS, WATER LEVEL, LEAKS AND LENGTHS. IDENTIFY MANHOLE TO MANHOLE BOTH VERBALLY AND ON-SCREEN USING MANHOLE NUMBERS FROM APPROVED PLANS. ORDER OF WRITTEN REPORT SHALL BE THE SAME AS THE DVD OR HARD DRIVE. THE TELEVISING SHALL NOT TAKE PLACE UNTIL 75% OF THE OCCUPANCY PERMITS ARE ISSUED AND PRIOR TO THE INSTALLATION OF THE BITUMINOUS SURFACE COURSE. A DIGITAL COPY OF THE DVD OR HARD DRIVE SHALL ALSO BE PROVIDED TO THE VILLAGE.

19. TEST RESULTS: IF THE SANITARY SEWER INSTALLATION FAILS TO MEET THE TEST REQUIREMENTS SPECIFIED, THE CONTRACTOR SHALL DETERMINE THE CAUSE OR CAUSES OF THE DEFECT AND SHALL. AT HIS OWN EXPENSE REPAIR, OR REPLACE ALL MATERIALS, AND

20. CERTIFICATION: CONTRACTOR SHALL SUBMIT TWO CERTIFIED COPIES OF ALL REPORTS OF TESTS CONDUCTED BY AN INDEPENDENT LABORATORY BEFORE INSTALLATION OF PVC PLASTIC PIPE. TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH STANDARD METHOD OF TEST FOR "EXTERNAL LOADING PROPERTIES OF PLASTIC PIPE BY PARALLEL PLATE LOADING", ASTM STANDARDS D-2412 OR D-2241 AS APPROPRIATE FOR THE PIPE TO BE USED. TESTS SHALL ALSO BE CONDUCTED TO DEMONSTRATE JOINT PERFORMANCE AT 5% MAXIMUM DIAMETRIC DEFLECTION OF THE SPIGOT.

21. RECORD DRAWINGS: THE CONTRACTOR SHALL PROVIDE ALL INFORMATION TO PREPARE RECORD DRAWING(S) INCLUDING SERVICE STUB LOCATIONS, TO SPACECO. SPACECO SHALL PREPARE RECORD DRAWINGS AND SUBMIT TO APPROPRIATE PUBLIC AGENCIES. IF FINAL MEASUREMENTS INDICATE DEFICIENCIES, THE CONTRACTOR, AT HIS OWN COST, WILL ADJUST MANHOLES AND/OR SEWERS TO PROPER ELEVATIONS AND OTHERWISE CORRECT THE DEFICIENCIES.

22. LEAKAGE TESTING: INSPECTION AND LEAKAGE TESTING SHALL BE PERFORMED FOR ALL MANHOLES FOR WATERTICHTNESS IN ACCORDANCE WITH ASTM C969-94 "STANDARD PRACTICE FOR INFILTRATION AND EXFILTRATION ACCEPTANCE TESTING OF INSTALLED PRECAST CONCRETE PIPE SEWER LINES" OR ASTM C1244-93 "STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE PRESSURE (VACUUM) TEST".

23. ANY SANITARY MANHOLES IN THE FLOOPLAIN SHALL BE PROVIDED WITH WATERTIGHT LOCKED-TYPE COVERS IF THEY ARE NOT 1 FOOT ABOVE THE FLOODPLAIN ELEVATION.

STORM SEWER NOTES

1. STORM SEWER PIPE: ALL STORM SEWER PIPE SHALL BE HDPE FOR SEWERS 24" OR SMALLER IN DIAMETER AND RCP FOR SEWERS GREATER THAN 24" IN DIAMETER OR LESS THAN 2' OF COVER (TO SUBGRADE) UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH THE FOLLOWING:

HDPE: HIGH DENSITY POLYETHYLENE CORRUGATED PIPE WITH SMOOTH INTERIOR MEETING AASHTO M-294 SUCH AS ADS N-12 BY ADVANCED DRAINAGE SYSTEMS, COLUMBUS, OHIO OR APPROVED EQUAL. 2. RCP: "BAND SEAL" OR SIMILAR COUPLINGS SHALL BE USED WHEN JOINING SEWER PIPES OF DISSIMILAR MATERIALS.

3. ALL FOOTING DRAIN AND SUMP PUMP DISCHARGE PIPES SHALL BE CONNECTED TO THE STORM SEWER SYSTEM. DOWNSPOUTS SHALL DISCHARGE TO THE GROUND. 4. BEDDING: ALL STORM SEWERS SHALL BE INSTALLED ON A TYPE A GRANULAR BEDDING, 1/4" TO 3/4" IN SIZE (CA-13) WITH A MINIMUM THICKNESS EQUAL TO 1/4 THE OUTSIDE DIAMETER OF THE SEWER PIPE BUT NOT LESS THAN 6". BLOCKING OF ANY KIND FOR GRADE IS NOT PERMITTED. THE BEDDING MATERIALS SHALL BE COMPACTED TO 90% OF MODIFIED PROCTOR DENSITY. BEDDING SHALL EXTEND TO 12" OVER ANY PVC OR HDPE PIPES. 5. CONSTRUCTION: ALL STORM SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE.

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

7. STRUCTURES: MANHOLE, CATCH BASIN AND INLET BOTTOMS SHALL BE PRECAST CONCRETE SECTIONAL UNITS OR MONOLITHIC CONCRETE, MANHOLES AND CATCH BASINS SHALL BE 4' IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS. STRUCTURE JOINTS SHALL BE SEALED WITH O-RING OR BUTYL ROPE. A MAXIMUM OF TWELVE (12") INCHES OF "INFRA-RISER" OR APPROVED EQUAL ADJUSTING RINGS SHALL BE USED. A CONCRETE BENCH TO DIRECT FLOWS SHALL BE CONSTRUCTED IN THE BOTTOM OF ALL

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

MANHOLE LIDS SHALL BE MACHINE SURFACED, NON-ROCKING DESIGN. THE CLOSED LIDS SHALL HAVE THE WORD "STORM-TINLEY PARK" CAST ON THE LID. THE JOINTS BETWEEN CONCRETE SECTION ADJUSTING RINGS, AND FRAME SHALL BE SEALED WITH A MASTIC COMPOUND. 8. ALL LOW POINT STORM STRUCTURES ARE TO HAVE 10' OF 4" UNDERDRAIN PROVIDED 24" BELOW THE TOP OF LID IN EACH DIRECTION.

9. CLEANING: THE STORM SEWER SYSTEM SHALL BE THOROUGHLY CLEANED PRIOR TO FINAL INSPECTION AND TESTING. 10. THE STORM SEWER SHALL BE TELEVISED IF REQUIRED BY THE MUNICIPALITY.

SOIL EROSION AND SEDIMENTATION CONTROL SPECIFICATIONS

A. THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF THE MUNICIPAL CODE, THE ILLINOIS PROCEDURES AND STANDARDS FOR URBAN SOIL EROSION AND SEDIMENTATION CONTROL, AND IEPA STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENTATION CONTROL.

SEE GRADING SHEET FOR EROSION CONTROL MEASURES. C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION AND MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL

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

2. IMPLEMENTATION

A. BEFORE STARTING CLEARING AND SITE GRADING WORK, A CONSTRUCTION ENTRANCE AND SILT FENCES SHALL BE INSTALLED ONLY IF DIRECTED BY THE MUNICIPAL ENGINEER, THE CONTRACTOR SHALL INSTALL SILT FENCES WHERE NEEDED ONLY AT DIRECTION OF MUNICIPAL ENGINEER. B. THE CONSTRUCTION ENTRANCE TO THE SITE SHALL BE STABILIZED WITH GRAVEL PRIOR TO ANY WORK ON THE SITE. THE ENTRANCE SHALL BE MONITORED PERIODICALLY FOR ITS EFFECTIVENESS TO COLLECT DIRT WHICH COULD LEAVE THE SITE VIA CONSTRUCTION VEHICLES. ANY DEFICIENCIES

C. GRAVELED ROADS, ACCESS DRIVES, PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH, AND VEHICLE WASHDOWN FACILITIES, IF NECESSARY, SHALL BE PROVIDED TO PREVENT SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED BEFORE THE END OF EACH WORKDAY.

D. ANY PUBLIC AND/OR PRIVATE ROADS THAT ARE ADJACENT TO THE SITE AND USED FOR INGRESS AND EGRESS, SHALL BE MONITORED AND SWEPT WHEN DIRTY AT THE DIRECTION OF THE MUNICIPAL ENGINEER. E. SILT SAVERS OR APPROVED EQUAL SHALL BE INSTALLED AND MAINTAINED AT ALL INTAKE STRUCTURES (I.E., INLETS, CATCH BASINS) AS SHOWN ON THE PLAN.

IF A STOCKPILE IS TO REMAIN IN PLACE FOR MORE THAN 10 DAYS, SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED AROUND SUCH STOCKPILE. IF MORE THAN 2 MONTHS, THEN IT IS REQUIRED THAT THE STOCKPILE BE SEEDED

SO AS TO MINIMIZE SOIL EROSION BY BOTH WIND AND WATER. G. THE SURFACE OF STRIPPED AREAS SHALL BE PERMANENTLY OR TEMPORARILY PROTECTED FROM SOIL EROSION WITHIN 15 DAYS AFTER FINAL GRADE IS REACHED. STRIPPED AREAS NOT AT FINAL GRADE THAT WILL REMAIN UNDISTURBED FOR MORE THAN 14 DAYS AFTER INITIAL DISTURBANCE SHALL BE PROTECTED FROM EROSION. TEMPORARY COVER SHALL BE MAINTAINED CONTINUOUSLY UNTIL PERMANENT COVER IS ESTABLISHED.

H. WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION DEWATERING SHALL BE FILTERED. 3. INSPECTION AND MAINTENANCE

A. THE TEMPORARY EROSION CONTROL MEASURES SHALL BE IN PLACE AND WORK EFFECTIVELY UNTIL ALL THE PERMANENT EROSION CONTROL ITEMS ARE FULLY

B. THE CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES WEEKLY AND AFTER ANY STORM EVENT IN EXCESS OF 1/2". ANY DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY. C. AT THE COMPLETION OF THE PROJECT, ALL STORM SEWER PIPES AND STRUCTURES SHALL BE CLEANED AND FREE OF DIRT AND DEBRIS. THE SEDIMENTATION SHALL BE REMOVED FROM THE STORM SEWER SYSTEM AND DETENTION AREAS AND SHALL NOT BE WASHED OUT IN THE STORM SEWER SYSTEM. VILLAGE OF TINLEY PARK EROSION CONTROL NOTES

The following general principles shall apply to any movement of earth and any sedimentation and erosion control plan and the granting of a permit for the execution of said plan as hereinafter provided:

The smallest practical area of land shall be exposed at any given time during development. Such minimum area exposure shall be kept to as short a duration of time as is practical. Temporary vegetation or, where appropriate, mulching or other non-viable cover shall be used to protect areas exposed during development. Sediment basins, debris basins, desilting basins, or silt traps shall be installed and maintained to remove sediment from runoff waters from land undergoing development. Provision shall be made to effectively accommodate the increased runoff caused by changed soil and surface conditions during and after development. Permanent, final plant covering or structures shall be installed as soon as possible. The plan of development shall relate to the toppgraphy and soils of the site so that the

The plan of development shall relate to the topography and soils of the site so that the lowest potential for erosion is created. Natural plant covering shall be retained and protected so far as is consistent with developing the site.

WATERMAIN NOTES

2. FITTINGS: ALL FITTINGS SHALL BE OF DUCTILE IRON IN ACCORDANCE WITH AWWA LATEST STANDARD RATED 350 PSL.

4. A BARE #6 STRANDED ALUMINUM TRACER WIRE AND 3" WIDE, 4 MIL THICK, RED PLASTIC WARNING TAPE SHALL BE INSTALLED 12" ABOVE THE TOP OF PIPE [OR: A 3" WIDE, 4.5 MIL THICK, DETECTABLE RED PLASTIC WARNING TAPE SHALL BE INSTALLED 12" ABOVE THE TOP OF PIPE].

6. VALVES: GATE VALVES SHALL BE USED ON ALL WATERMAIN 3" TO 10" IN SIZE. ALL VALVES ON MAINS 10" AND LARGER TO BE BUTTERLY VALVES. ALL VALVES SHALL TURN COUNTER-CLOCKWISE TO OPEN. VALVES SHALL BE IRON BODY RESILIENT WEDGE GATE VALVES WITH BRONZE MOUNTED SEATS AND NON-RISING STEMS CONFORMING TO AWWA C-509. THE VALVES SHALL HAVE MECHANICAL JOINTS.

7. VALVE VAULTS: VALVE VAULTS SHALL BE PRECAST CONCRETE STRUCTURES AS NOTED ON THE PLANS. THE FRAME AND LID SHALL BE AS NOTED IN THE DETAILS WITH "WATER-TINLEY PARK" EMBOSSED ON THE LID. 8. FIRE HYDRANTS: FIRE HYDRANTS SHALL CONFORM TO AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARD NO. C-502, LATEST REVISION, AND SHALL BE AN EAST JORDAN IRON WORKS 5BR-250. FIRE HYDRANTS SHALL BE INSTALLED WITH AN AUXILIARY VALVE AND CAST IRON VALVE BOX. THE PUMPER CONNECTION SHALL FACE ROADWAY. ALL VALVES ON MAINS 10" AND LARGER TO BE BUTTERFLY VALVES. PROVIDE THE RODS FROM THE MAINLINE TEE TO THE AUXILIARY VALVE, AND BETWEEN THE AUXILIARY VALVE AND HYDRANT BARREL WHERE NOT BOLTED TOGETHER.

TAPPING SADDLES SPECIFICALLY DESIGNED FOR USE WITH PVC PIPE SHALL BE IN CONJUNCTION WITH THE CORPORATION STOP.

11. MAXIMUM DEFLECTION AT PIPE JOINTS SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURER'S CURRENT RECOMMENDATIONS AND AWWA SPECIFICATIONS.

13. GRANULAR BEDDING MATERIAL OR GRANULAR BACKFILL MATERIAL SHALL BE CAREFULLY PLACED TO 12" OVER THE TOP OF THE PIPE BEFORE FINAL BACKFILLING AND COMPACTION. 14. A MINIMUM DEPTH OF COVER OF 5' SHALL BE MAINTAINED OVER THE WATER LINES. THE MAXIMUM COVER SHALL BE EIGHT (8') FEET EXCEPT AT SPECIAL CROSSINGS.

OF THE SEWER; AND
3) THE WATERMAIN IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF

1. PIPE MATERIALS: WATERMAINS OR SERVICES 3" OR LARGER IN DIAMETER SHALL BE CONSTRUCTED OF BITUMINOUS COATED, CEMENT LINED DUCTILE IRON PIPE, CLASS 52, CONFORMING TO ANSI A-21.50 (AWWA C150) AND ANSI A-21.51 (AWWA C151), CEMENT MORTAR LINING SHALL CONFORM TO ANSI A-21.4 (AWWA C-104), THE JOINTS SHALL BE O-RING GASKETED PUSH-ON OR MECHANICAL JOINTS CONFORMING TO ANSI A-21.11 (AWWA C-111).

3. ALL DUCTILE IRON WATERMAIN AND FITTINGS SHALL BE POLYETHYLENE TUBE ENCASED. ALL MECHANICAL JOINT FITTINGS SHALL USE STAINLESS STEEL NUTS AND BOLTS.
3A. "MEGALUG" RETAINERS SHALL BE REQUIRED ON ALL BENDS, ELBOWS, TEES AND HYDRANTS.

5. WATER SERVICES: WATER SERVICE PIPE, 2" IN DIAMETER OR SMALLER, SHALL BE TYPE K COPPER WATER TUBING, CONFORMING TO ASTM B-88 AND B-251, WITH FLARED END SECIONS.

THE MECHANICAL JOINTS AND ALL FASTENERS ON THE VALVE BODY SHALL HAVE STAINLESS STEEL NUTS AND BOLTS.

9. CORPORATION STOPS: CORPORATION STOPS SHALL BE BRONZE BODY KEY STOPS CONFORMING TO AWWA C-800, AND SHALL INCLUDE "J" BEND, TAIL PIECE, AND COMPRESSION FITTINGS. SIZE AND LOCATION AS SHOWN ON PLANS.

THE BREAK FLANGE AND ALL BELOW GRADE FITTINGS SHALL HAVE STAINLESS STEEL NUTS AND

10. SERVICE BOX: PROVIDE CURB VALVE AND CURB BOX AS INDICATED ON THE PLANS. BOX SHALL BE EXTENSION TYPE WITH FOOT PIECE AND STATIONARY RODS FOR 6 (6') FEET OF BURY.

12. BEDDING: ALL WATERMAINS SHALL BE BEDDED ON FIRM GROUND WITH BELLHOLES EXCAVATED SO THAT THE PIPE HAS AN EVEN BEDDING FOR IT'S ENTIRE LENGTH. 4" AGGREGATE BEDDING SHALL BE USED.

15. CONCRETE THRUST BLOCKING SHALL BE INSTALLED ON WATERMAINS AT ALL BENDS, TEES, ELBOWS, ETC. RETAINER GLANDS MUST BE USED ON ALL MAINS 12" OR LARGER, MEGALUG RETAINER GLANDS ARE REQUIRED IN ADDTION TO OR INSTEAD OF THRUST BLOCKING.

1. HORIZONTAL SEPARATION: MATERMAINS SHALL BE LAID AT LEAST TEN FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED DRAIN, STORM SEWER, SANITARY SEWER OR SEWER SERVICES CONNECTION. WATERMAINS MAY BE LAID CLOSER THAN TEN FEET TO A SEWER LINE WHEN:
LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF TEN FEET;
THE WATERMAIN INVERT IS AT LEAST 18 INCHES ABOVE THE CROWN

THE SEWER.

c) BOTH THE WATERMAIN AND DRAIN OR SEWER SHALL BE CONSTRUCTED WITH PIPE EQUIVALENT TO WATERMAIN STANDARDS OF CONSTRUCTION WHEN IT IS IMPOSSIBLE TO MEET (a) OR (b) ABOVE. THE DRAIN OR SEWER SHALL BE PRESSURE TESTED TO THE MAXIMUM EXPECTED SURCHARGE HEAD BEFORE

2. VERTICAL SEPARATION:
a) A WATERMAIN SHALL BE LAID SO THAT ITS INVERT IS 18 INCHES ABOVE THE CROWN OF THE DRAIN OR SEWER WHENEVER WATERMAINS CROSS STORM SEWERS, SANITARY SEWERS OR SEWER SERVICE CONNECTIONS. THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATERMAIN LOCATED WITHIN TEN FEET HORIZONTALLY OF ANY SEWER OR DRAIN CROSSED. A LENGTH OF WATERMAIN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIDISTANCE FROM THE SEWER OR DRAIN.
b) BOTH THE WATERMAINS AND SEWER SHALL BE CONSTRUCTED WITH PIPE EQUIVALENT TO WATERMAIN STANDARDS OF CONSTRUCTION WHEN:
1) IT IS IMPOSSIBLE TO OBTAIN THE PROPER VERTICAL SEPARATION AS DESCRIBED IN (a) ABOVE; OR
2) THE WATERMAIN PASSES UNDER A SEWER OR DRAIN.
c) A VERTICAL SEPARATION OF 18 INCHES BETWEEN THE INVERT OF THE SEWER OR DRAIN AND THE CROWN OF THE WATERMAIN SHALL BE MAINTAINED WHERE A WATERMAIN CROSSES UNDER SEWER. SUPPORT THE SEWER OR DRAIN LINES TO PREVENT SETTLING AND BREAKING THE WATER MAIN.
d) CONSTRUCTION SHALL EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FORM THE WATERMAIN TO THE SEWER OR DRAIN LINE IS AT LEAST TEN FEET.

17. ALL WATERMAINS SHALL BE PRESSURE TESTED, FLUSHED AND DISINFECTED IN ACCORDANCE WITH AWWA AND MUNICIPAL SPECIFICATIONS. EACH VALVE SECTION SHALL BE PRESSURE TESTED FOR A MINIMUM OF 4 HOURS.AT NO TIME IS THERE TO BE ANY VISIBLE LEAKAGE FROM THE MAIN. ALL WATERMAINS TO BE PRESSURE TESTED TO 150 PSI FOR 2 HOURS WITH ZERO PRESSURE LOSS.

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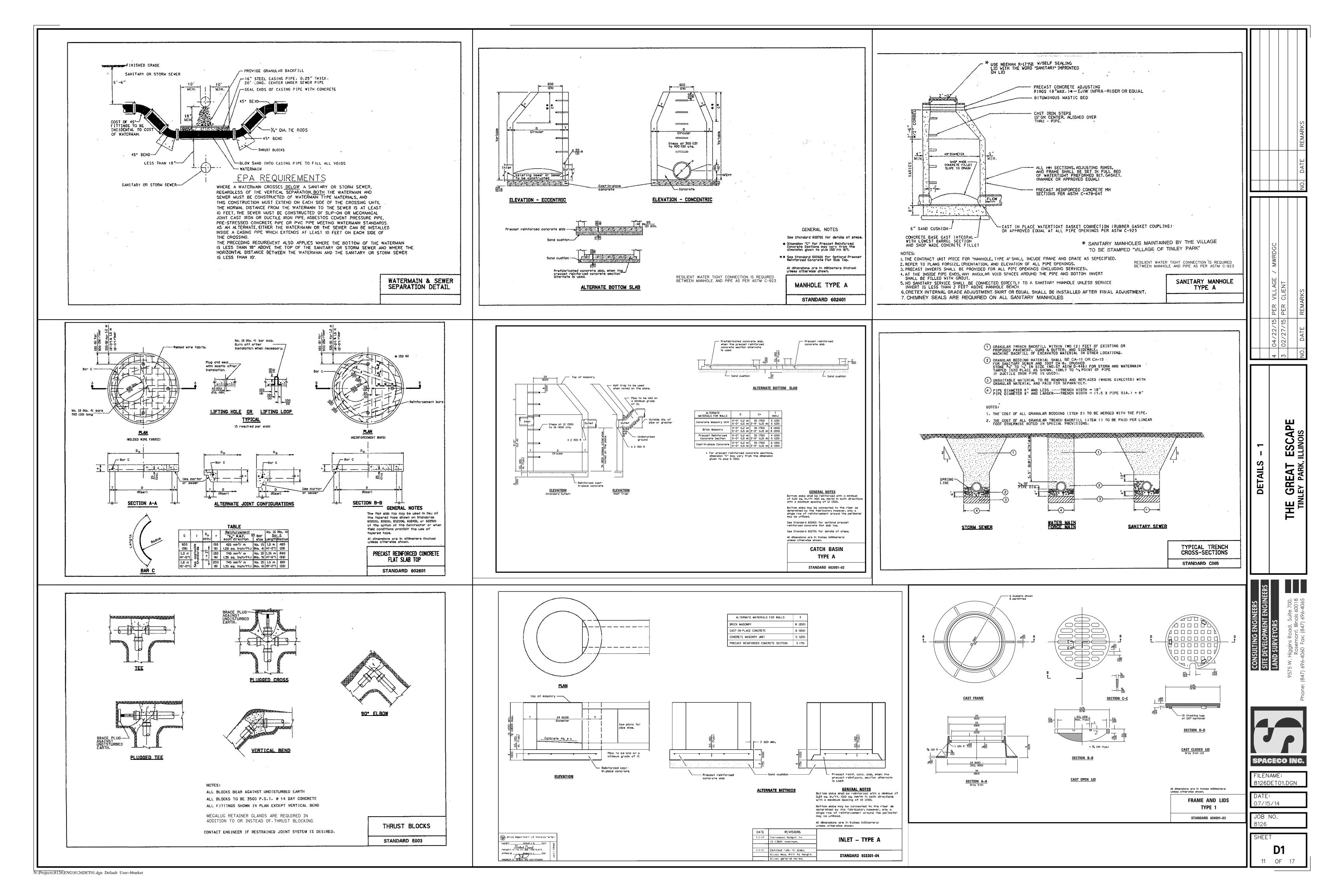
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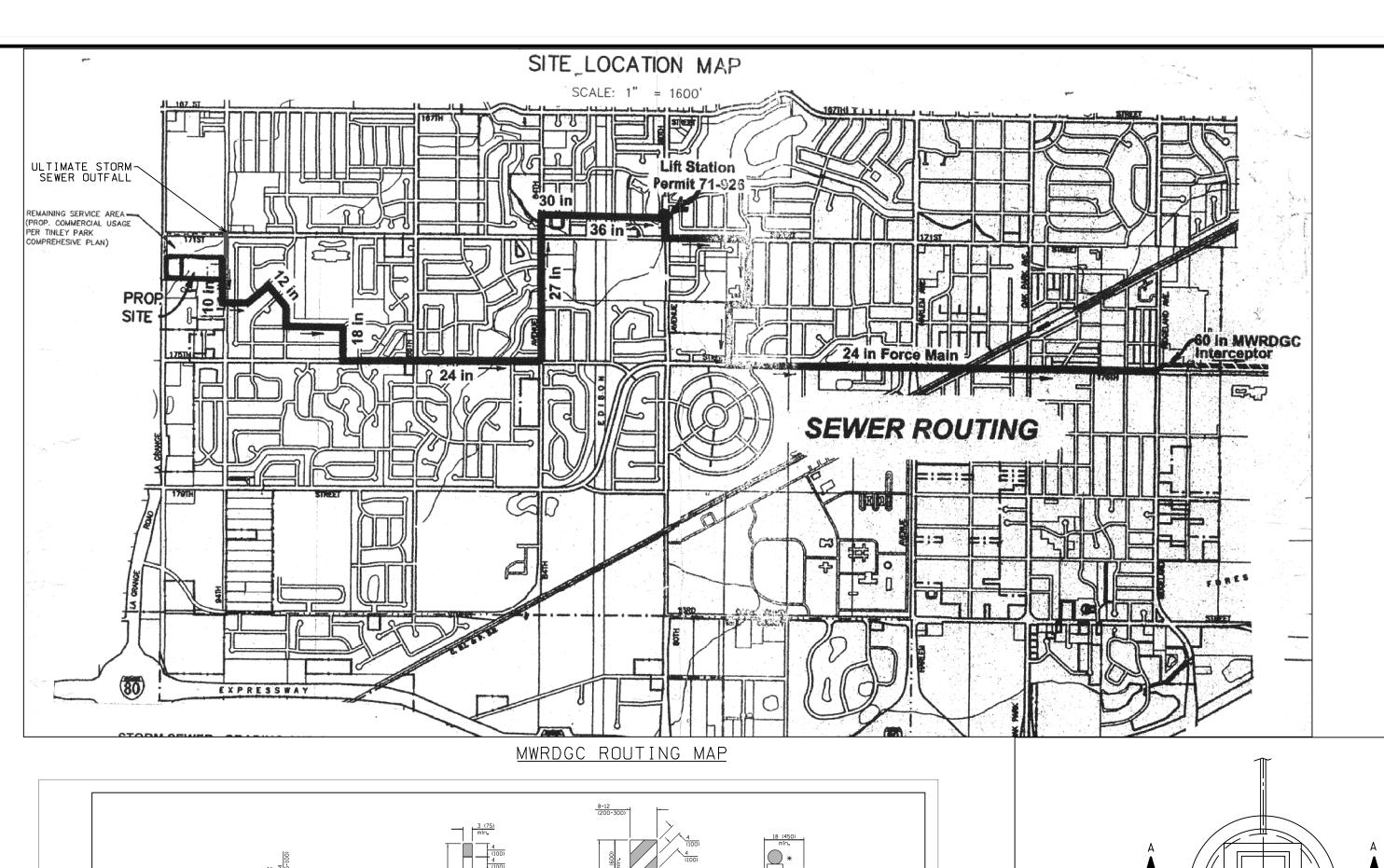
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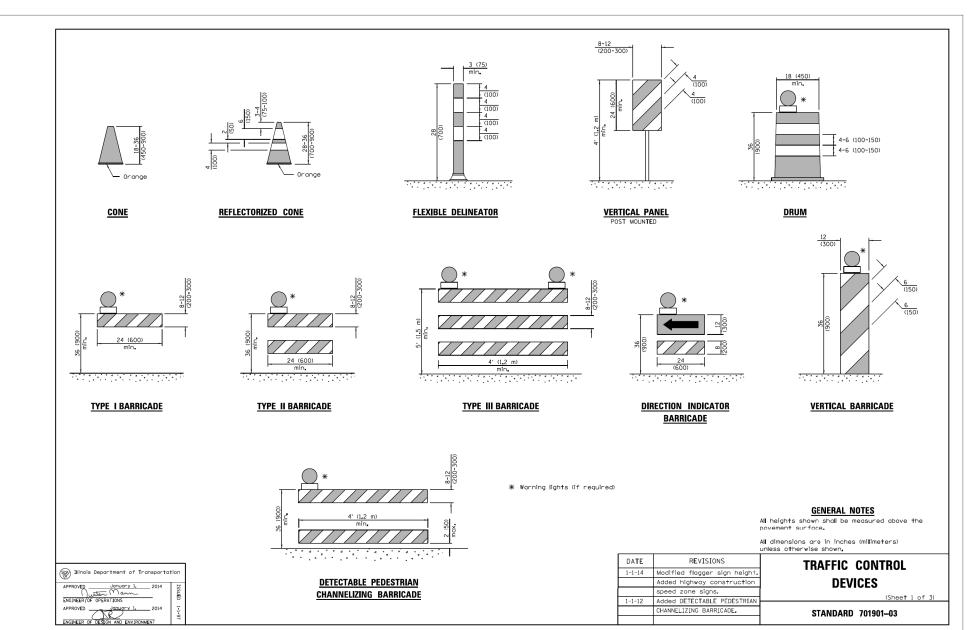
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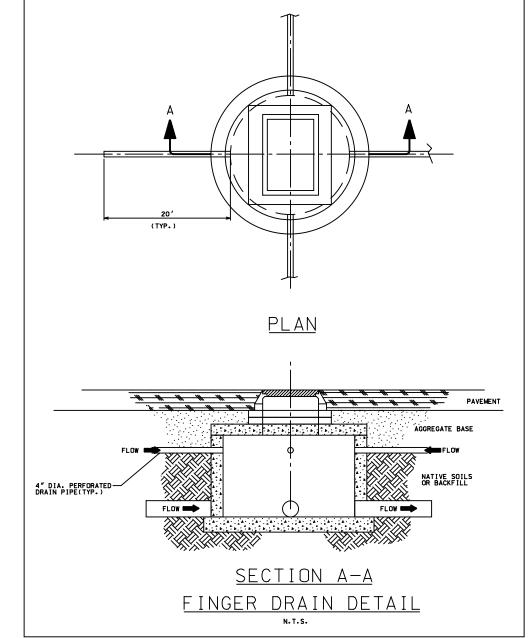
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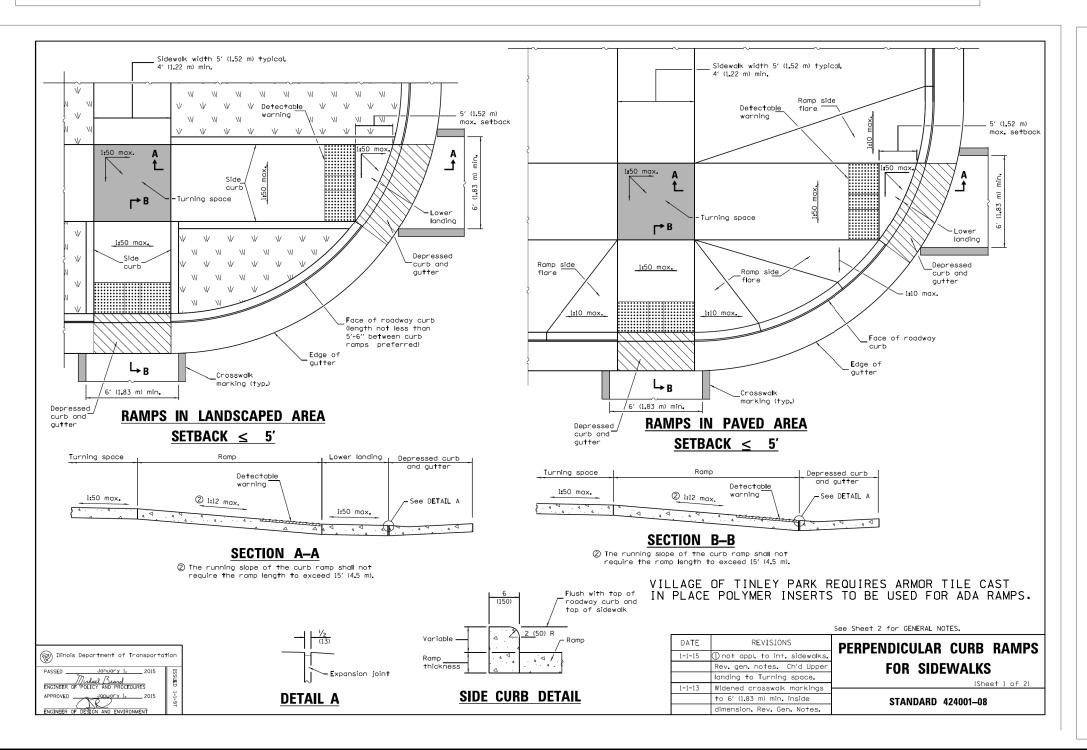
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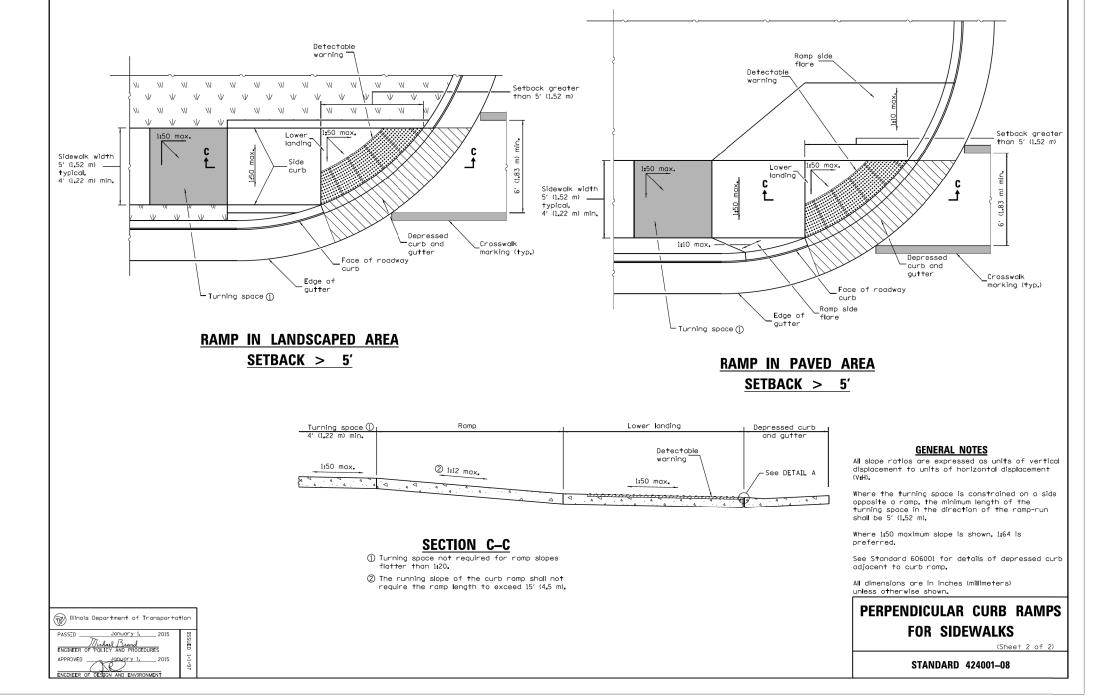


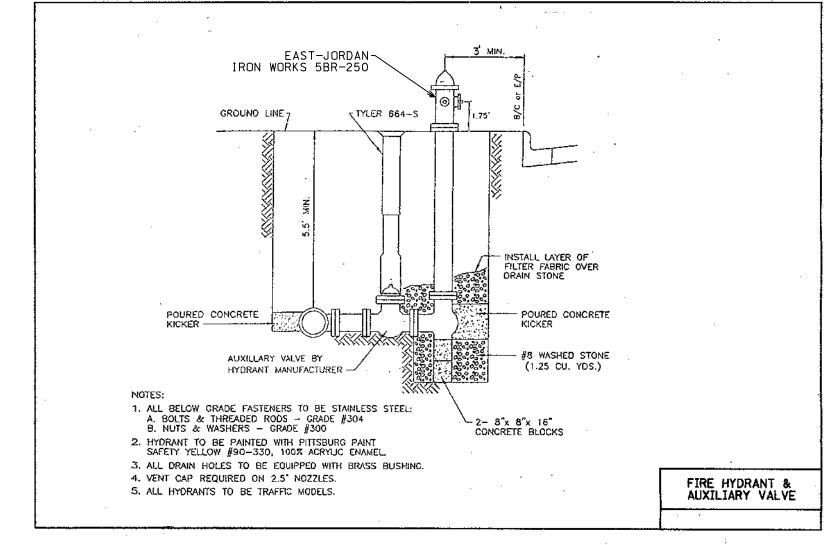


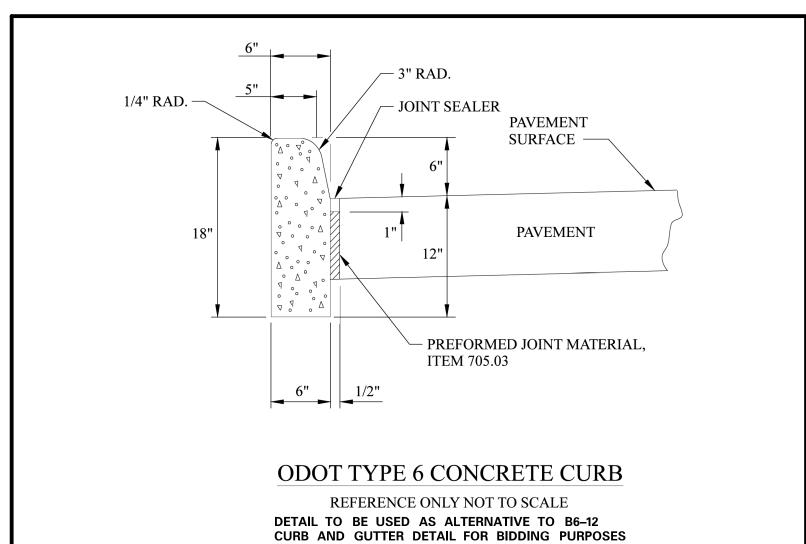


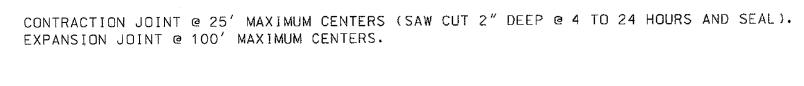


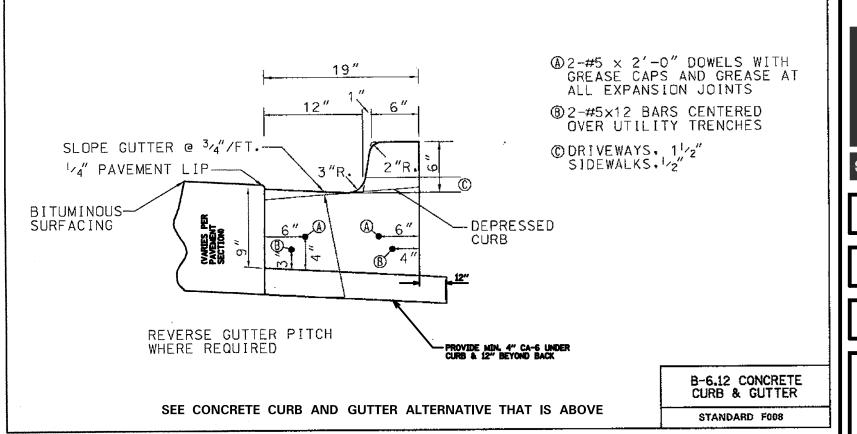












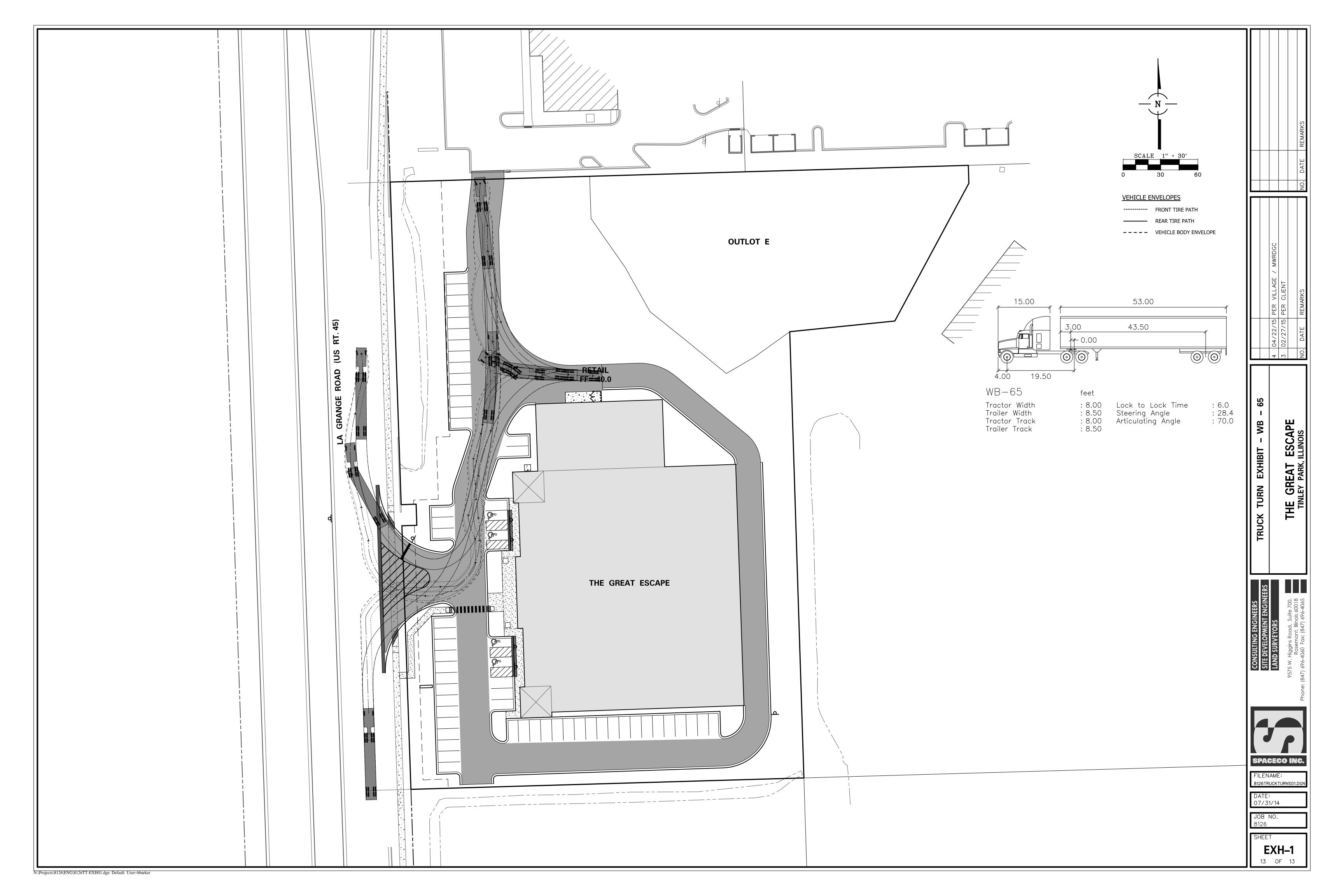


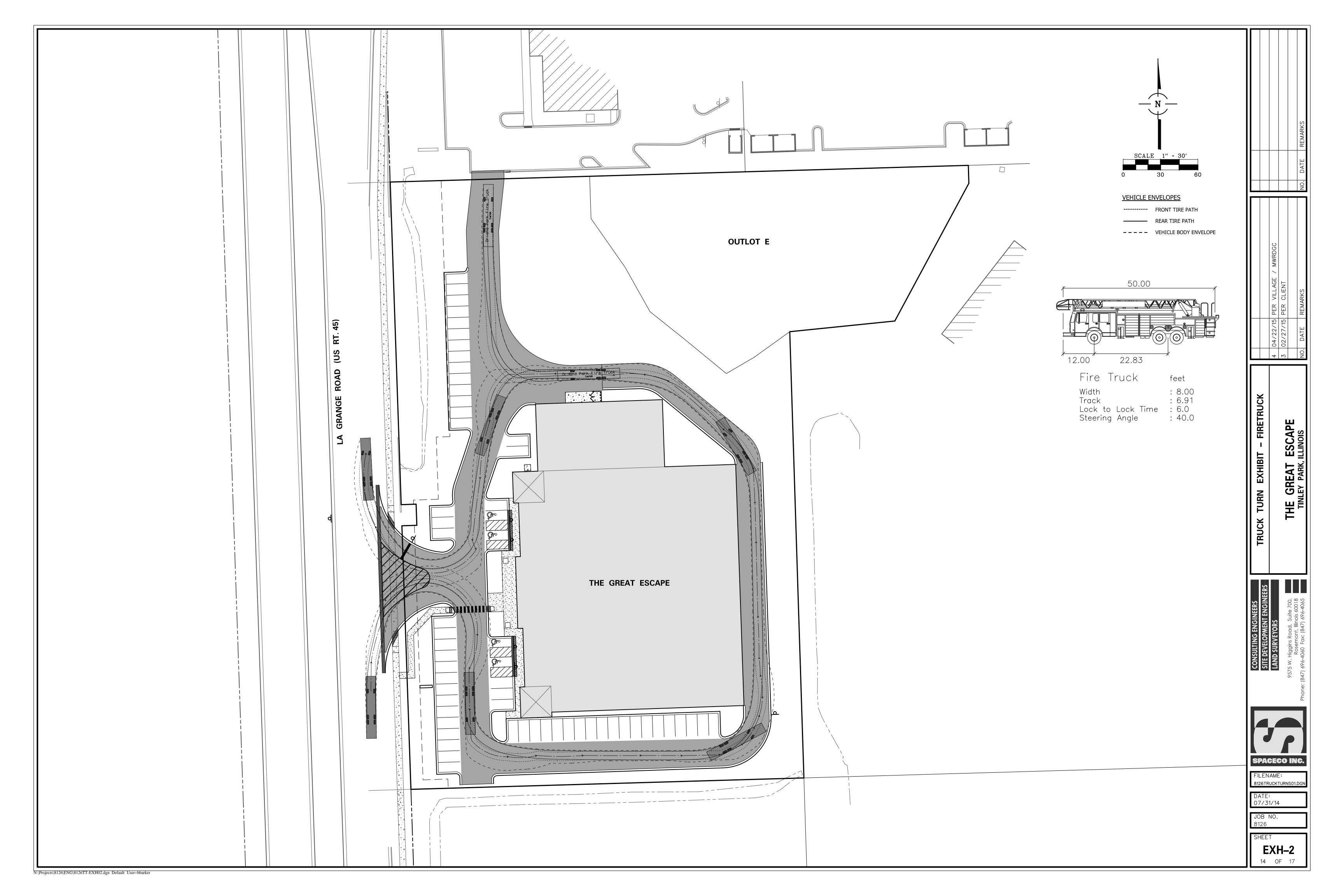
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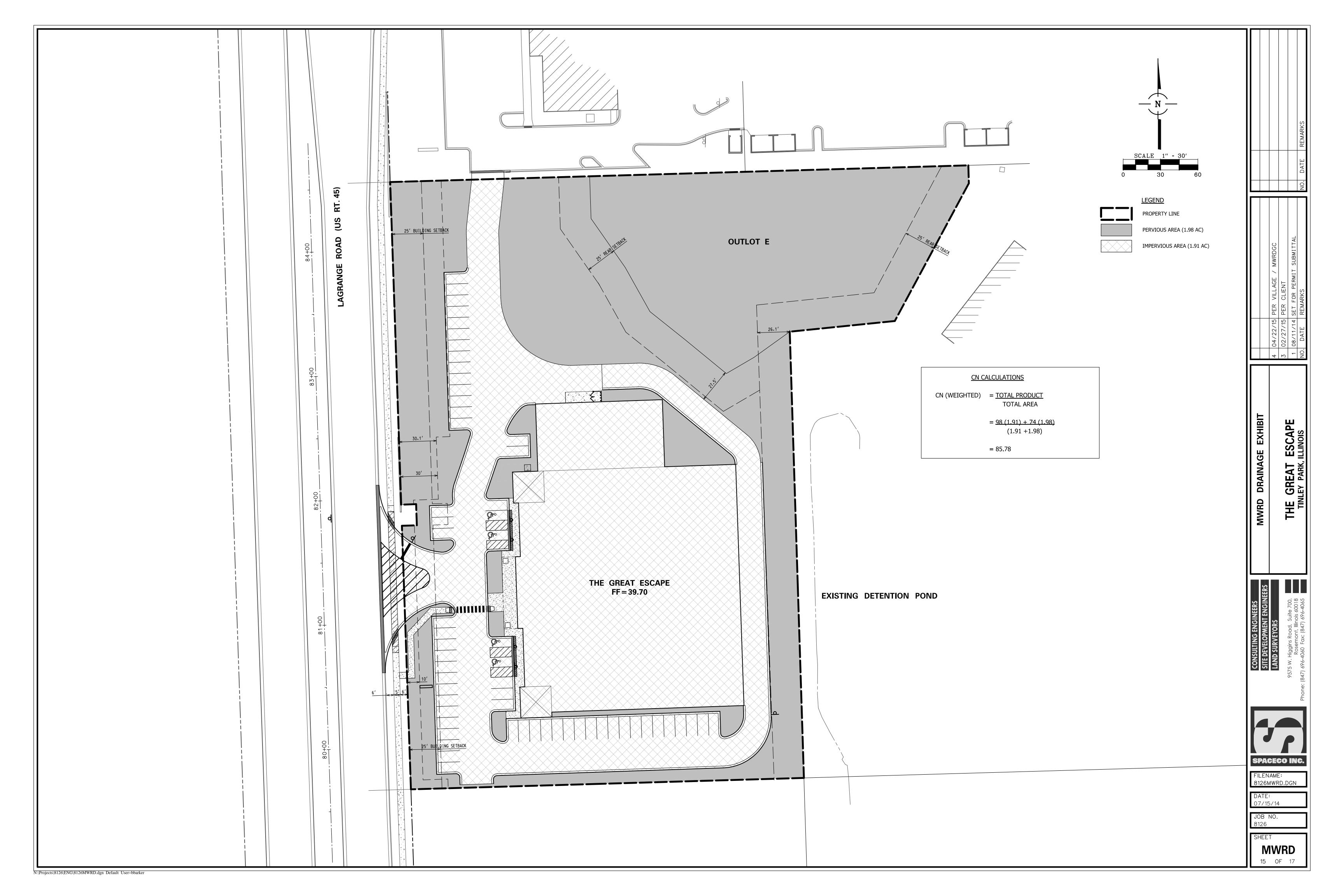
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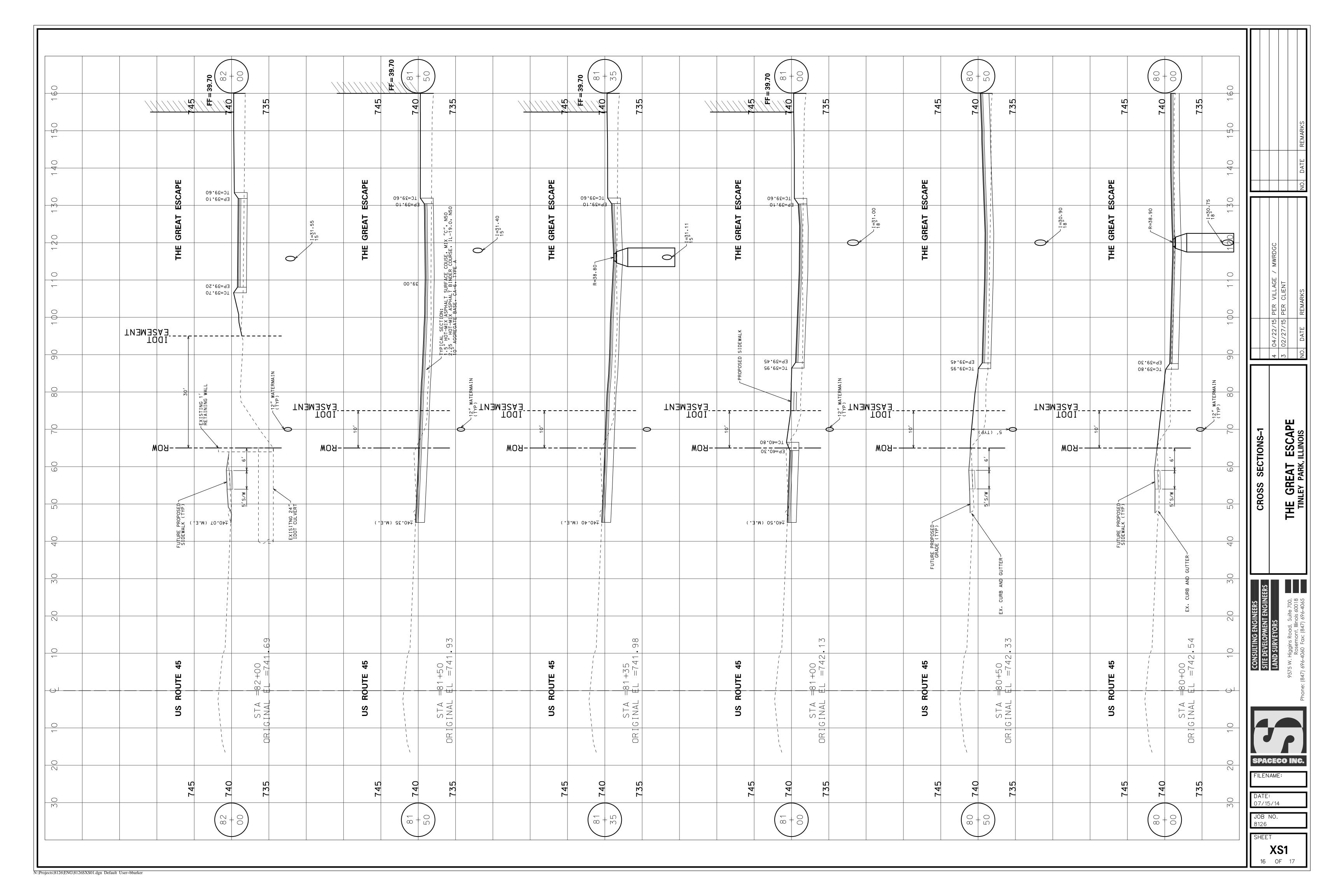
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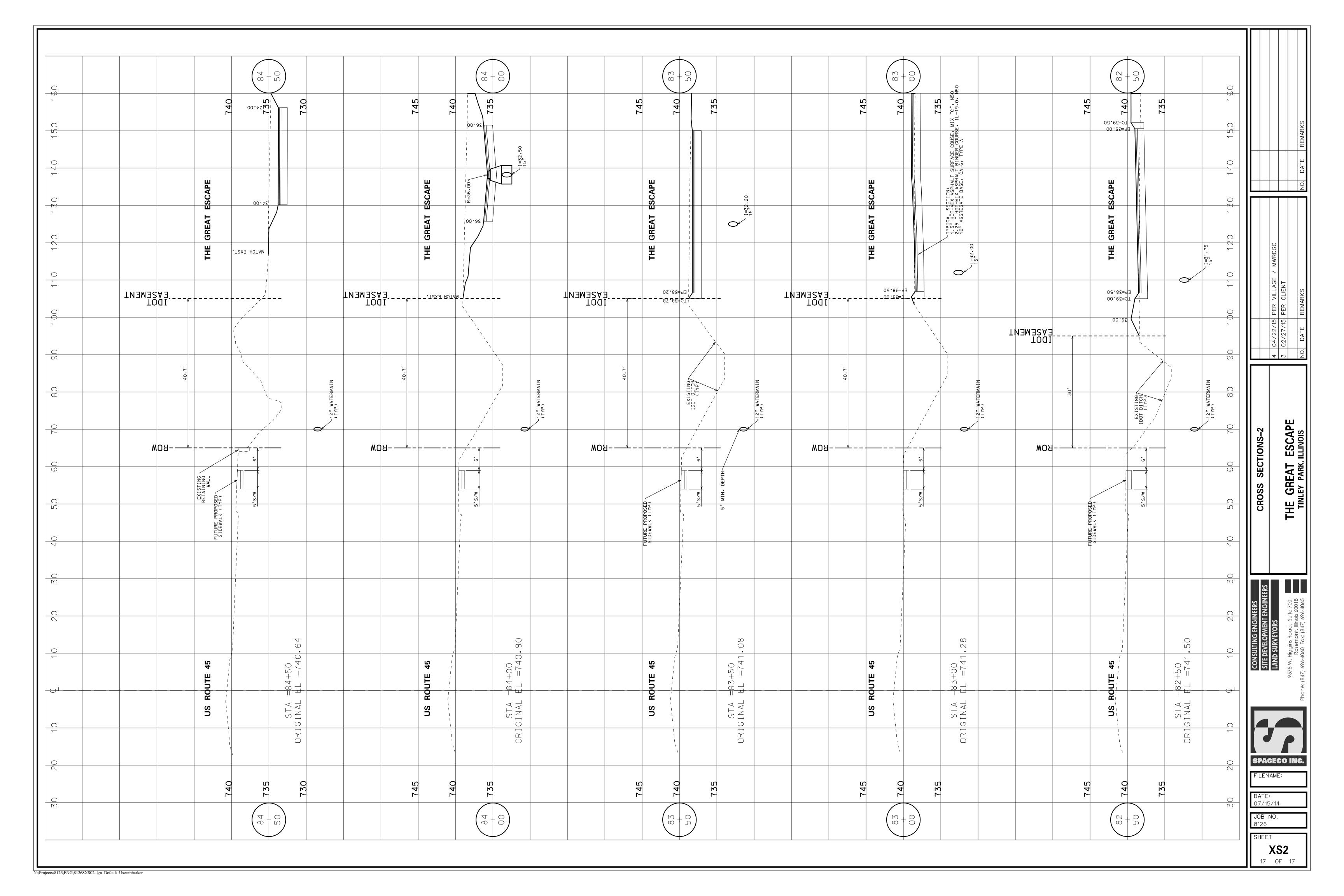
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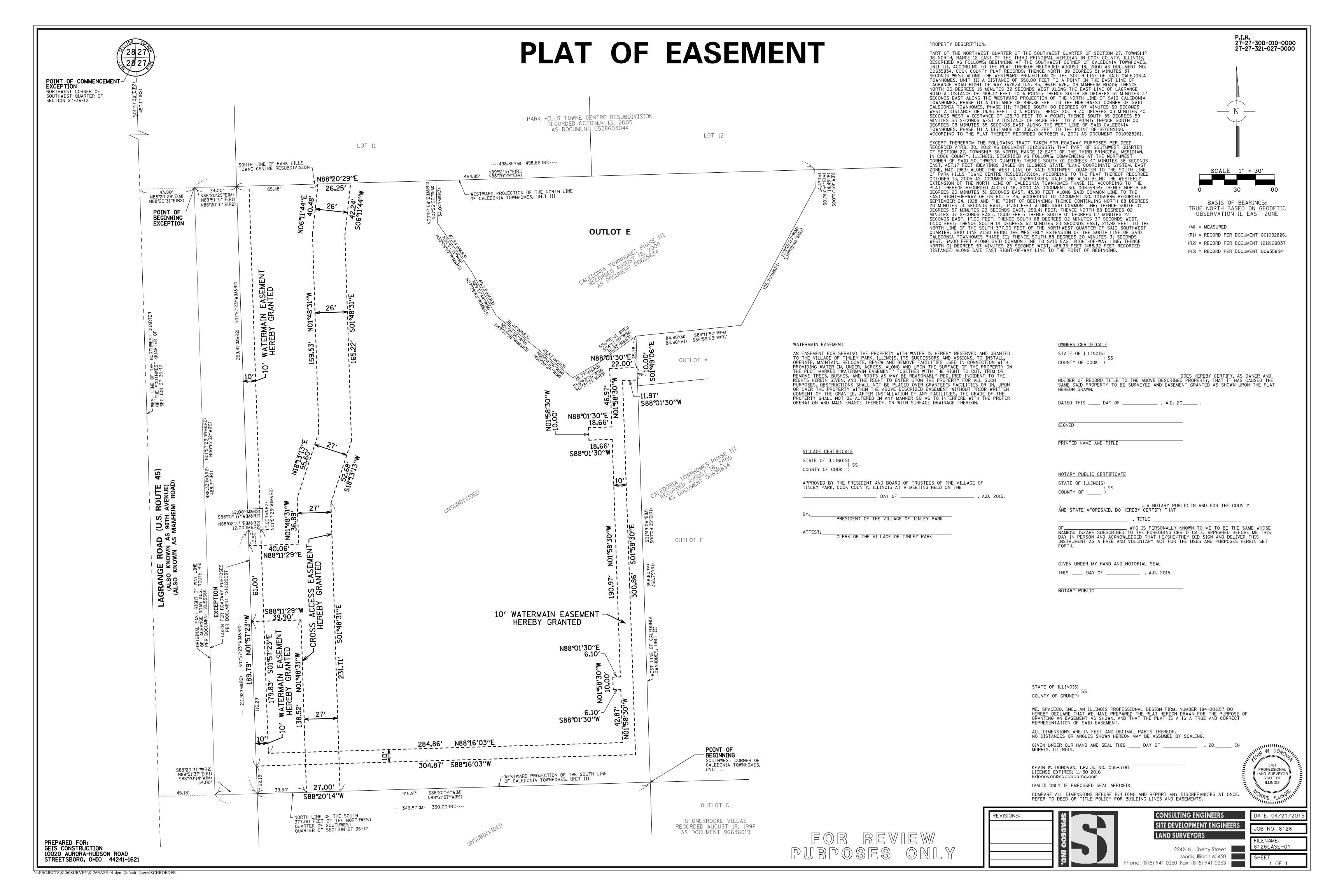


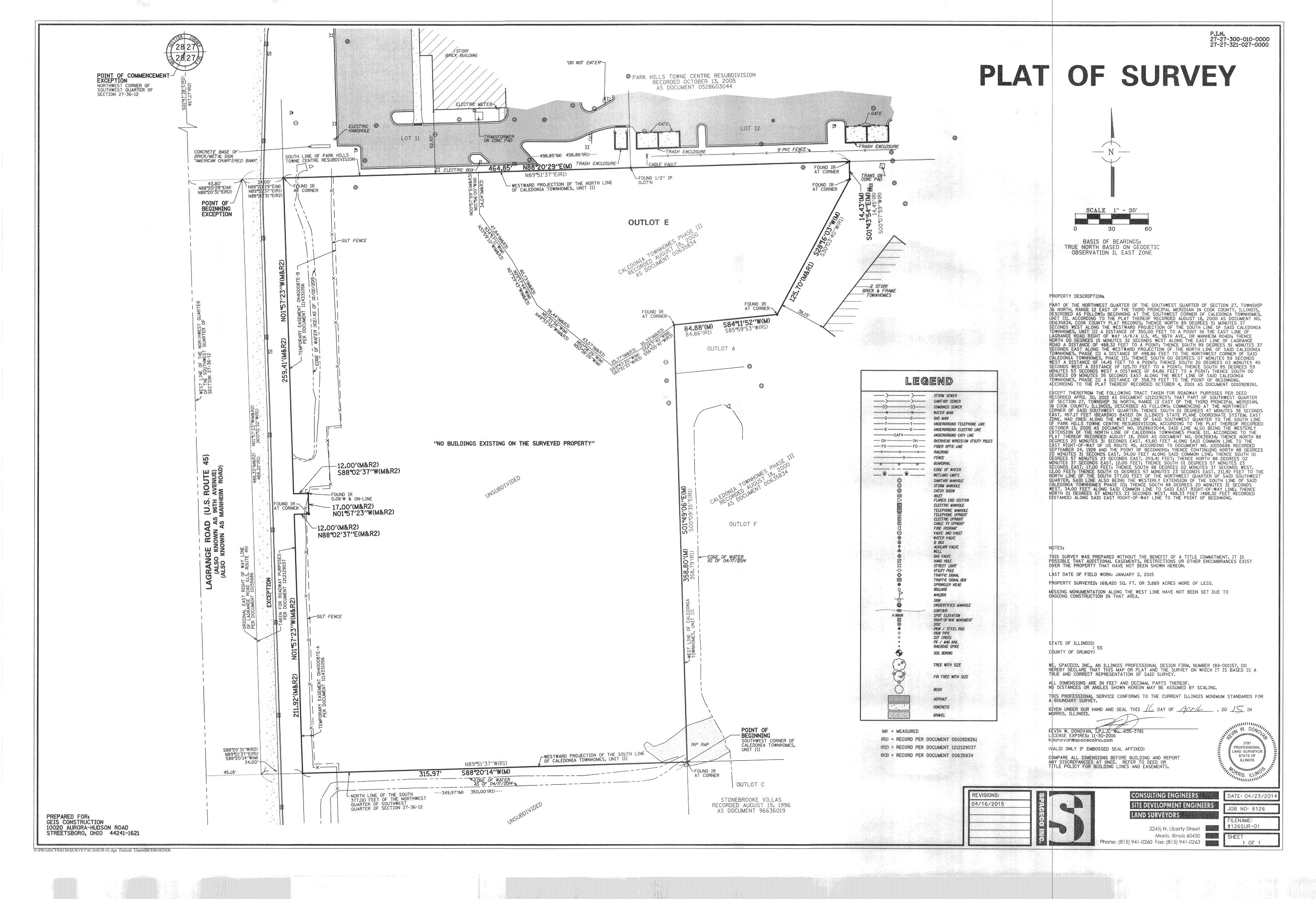












PLANT LIST

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	ROOTS
EVERGE	REEN TRE	ES				
15	PI-AB	PICEA ABIES	NORWAY SPRUCE	6'	-	В€В
9	PI-PU	PICEA PUNGENS	COLORADO SPRUCE	6'	-	В∉В
SHADE	TREES					
7	LI-RO	LIQUIDAMBAR S. 'ROTUNDILOBA'	FRUITLESS SWEETGUM	3" CAL.	-	В∉В
6	NY-SY	NYSSA SYLVATICA	SOUR GUM	3" CAL.	-	В₿В
3	PL-OC	PLATANIUS OCCIDENTALIS	AMERICAN SYCAMORE	3" CAL.	-	В \$ В
10	QU-MA	QUERCUS MACROCARPA	BUR OAK	3" CAL.	-	В \$ В
5	QU-MU	QUERCUS MUEHLENBERGII	CHINQUAPIN OAK	3" CAL.	-	В \$ В
5	QU-RU	QUERCUS RUBRA	RED OAK	3" CAL.	-	В \$ В
9	TI-ST	TILIA T. 'STERLING'	STERLING SILVER LINDEN	3" CAL.	-	B & B
ORNAM	ENTAL TR	REES				
8	AC-GI	ACER GINNALA	AMUR MAPLE	2.5" CAL.	-	В & В
11	AM-AB	AMELANCHIER G. 'AUTUMN BRILLIANCE.	AUTUMN BRILLIANCE SERVICE BERRY	2.5" CAL. TREE FORM	-	B # B
9	CO-MA	CORNUS MAS	CORNELIAN CHERRY DOGWOOD	2.5" CAL.	-	В∉В
5HRUBS	5					
53	BU-RO	BUXUS S. ROTUNDIFOLIA	UPRIGHT BOXWOOD	36"	-	B & B
44	CH-GC	CHAMAECYPARIS O. 'GRACILIS COMPACTA'	COMPACT HINOKI FALSE CYPRESS	5'	-	B \$ B
34	IL-GL	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	24"	-	B # B
44	JU-LO	JUNIPERUS SQ. 'LODERI'	LODERI JUNIPER	5'	-	В & В
38	PI-CO	PICEA GLAUCA 'CONICA'	DWARF ALBERTA SPRUCE	42"	-	#10 CONT
41	PI-NA	PINUS STROBUS 'NANA'	DWARF WHITE PINE	5'	-	B & B
54	TA-CH	TAXUS X. MEDIA 'CHADWICK'	CHADWICK YEW	24"	-	В∉В
38	TH-EM	THUJA O. 'EMERALD'	EMERALD ARBORVITAE	5'	-	В & В
ORNAM	ENTAL GR	RASSES		•		
361	SP-HE	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	CLUMP	#2 CONT.	24" O.C.
PERENN	NAL FLOW	NERS				
67	EC-MA	ECHINACEA PURPUREA 'MAGNUS'	MAGNUS PURPLE CONE FLOWER	CLUMP	#2 CONT.	18" O.C.
139	НЕ-НА	HEMEROCALLIS 'HEARTS AFIRE'	HEARTS AFIRE DAYLILY	CLUMP	#2 CONT.	12" O.C.
78	SL-MN	SLAVIA 'MAY NIGHT'	MAY NIGHT SALVIA	CLUMP	#2 CONT.	18" O.C.
	1	1		1		

BUFFERYARD CALCULATIONS

LOCATION	REQ. BUFFER PROPOS YD/WIDTH WIDTH		BUFFERYARD LENGHT	REQUIRED UNITS	PROVIDED	COMMENTS	
WEST PL	C/20'	20'	395'	16 CANOPY TREES 7 UNDERSTORY TREES 64 SHRUBS	16 CANOPY TREES 7 UNDERSTORY TREES 64 SHRUBS	10 CANOPY TREES ARE EVERGREENS	
NORTH PL	B/15'	15'	440'	13 CANOPY TREES 4 UNDERSTORY TREES 62 SHRUBS	13 CANOPY TREES 4 UNDERSTORY TREES 62 SHRUBS	3 CANOPY TREE ARE EVERGREEN	
EAST PL	C/25 ¹	25'	563'	20 CANOPY TREES 8 UNDERSTORY TREES 79 SHRUBS	20 CANOPY TREES 9 UNDERSTORY TREES 79 SHRUBS	4 CANOPY TREES ARE EVERGREEN	
SOUTH PL	C/10¹	101	256'	13 CANOPY TREES 6 UNDERSTORY TREES 52 SHRUBS	13 CANOPY TREES 6 UNDERSTORY TREES 52 SHRUBS	7 CANOPY TREES ARE EVERGREEN	

PARKING COVERAGE CALCULATIONS

PARKING LOT COVERAGE AREA = 33,992 SF

COVERAGE AREA = 5,343 SF - 15.72%

GENERAL NOTES:

- 1. THIS SHEET IS FOR PLANTING AND TURF INSTALLATION PURPOSES ONLY.
- 2. PROVIDE AND INSTALL 12" PLANTING BED MIX IN ALL SHRUB, ORNAMENTAL GRASS, GROUNDCOVER AND PERENNIAL BEDS.
- 3. PROVIDE AND INSTALL 4" TOPSOIL AND SEED ON ALL DISTURBED, NON-PLANTING BED MIX AREAS.
- 4. SEED WITH TURF MIX ALL DISTURBED AREAS WHICH ARE NOT TO BE SEEDED WITH WILDFLOWER, MEADOW GRASS OR CROWN VETCH MIXES.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL PLANTS, AS SHOWN ON THE PLANTING PLAN. QUANTITIES PROVIDED ON THE PLANT LIST ARE FOR ESTIMATION PURPOSES ONLY.
- LEGEND:

ORNAMENTAL TREE--SEE DET. 1/L1.2

DECIDUOUS SHADE TREE -- SEE DET. 1/L1.2



CONIFEROUS TREE--SEE DET. 2/L1.2



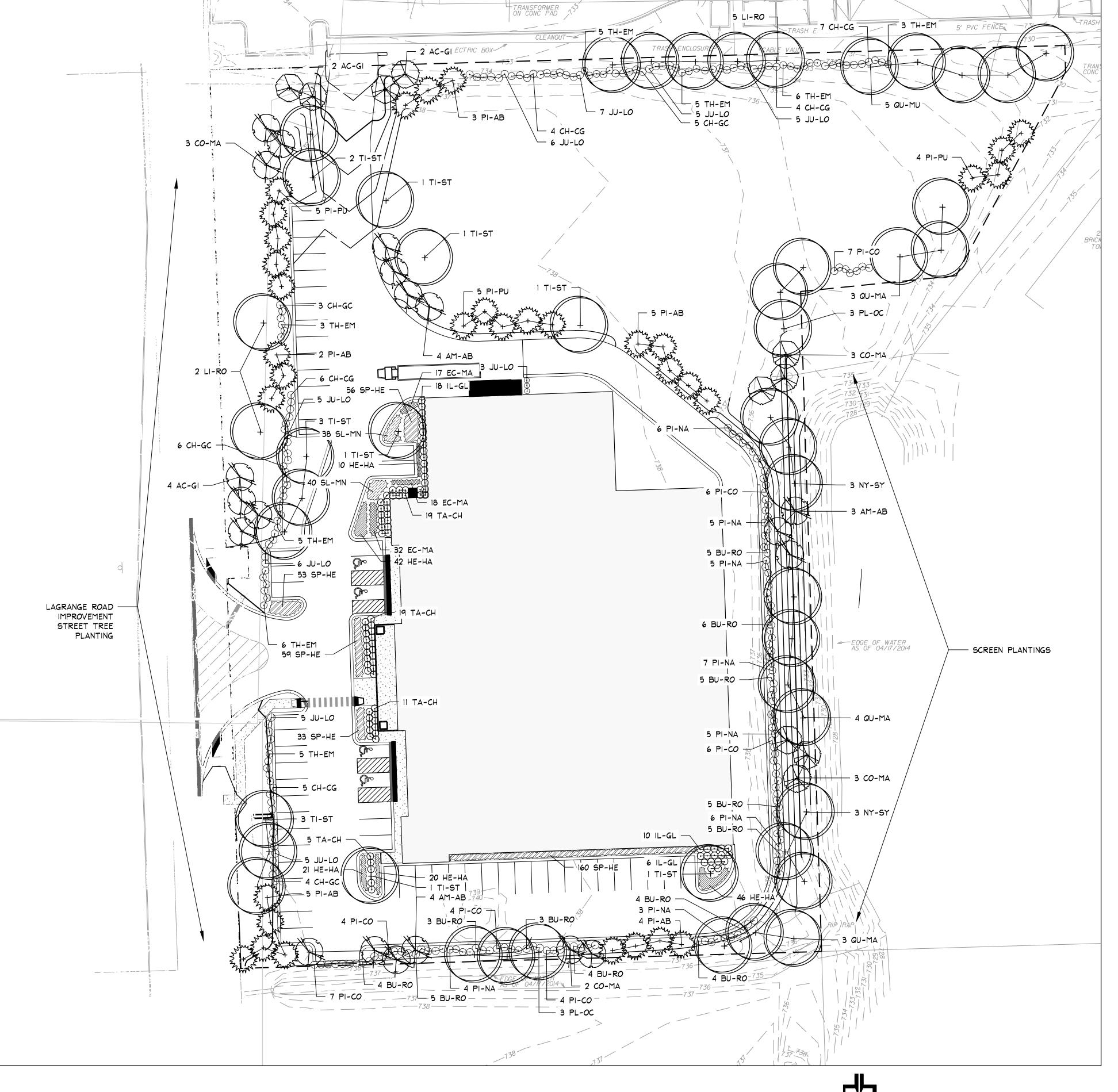
SHRUBS--SEE DET. 3/L1.2

- 6. COORDINATE LOCATIONS OF ALL TREES WITH ALL
- SECTION 1081.

7. ALL PLANTING, SEEDING, AND SOIL MATERIALS TO

CONFORM TO ILDOT STANDARD SPECIFICATION

- 8. TOPSOIL ACTIVITIES TO CONFORM TO ILDOT 211.
- 9. FINE GRADING ACTIVITIES TO CONFORM TO ILDOT 212 AND 214.
- 10. SEEDING AND MULCHING ACTIVITIES SHALL CONFORM TO ILDOT 250 AND 251.
- 11. PLANTING ACTIVITIES SHALL CONFORM TO ILDOT 253



PHASE 1 PLANTING PLAN



CALL TWO WORKING DAYS BEFORE YOU DIG (NON MEMBERS MUST BE CALLED DIRECTLY)



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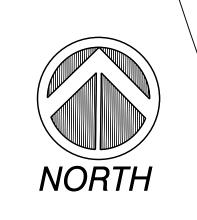
DATES AND REVISIONS

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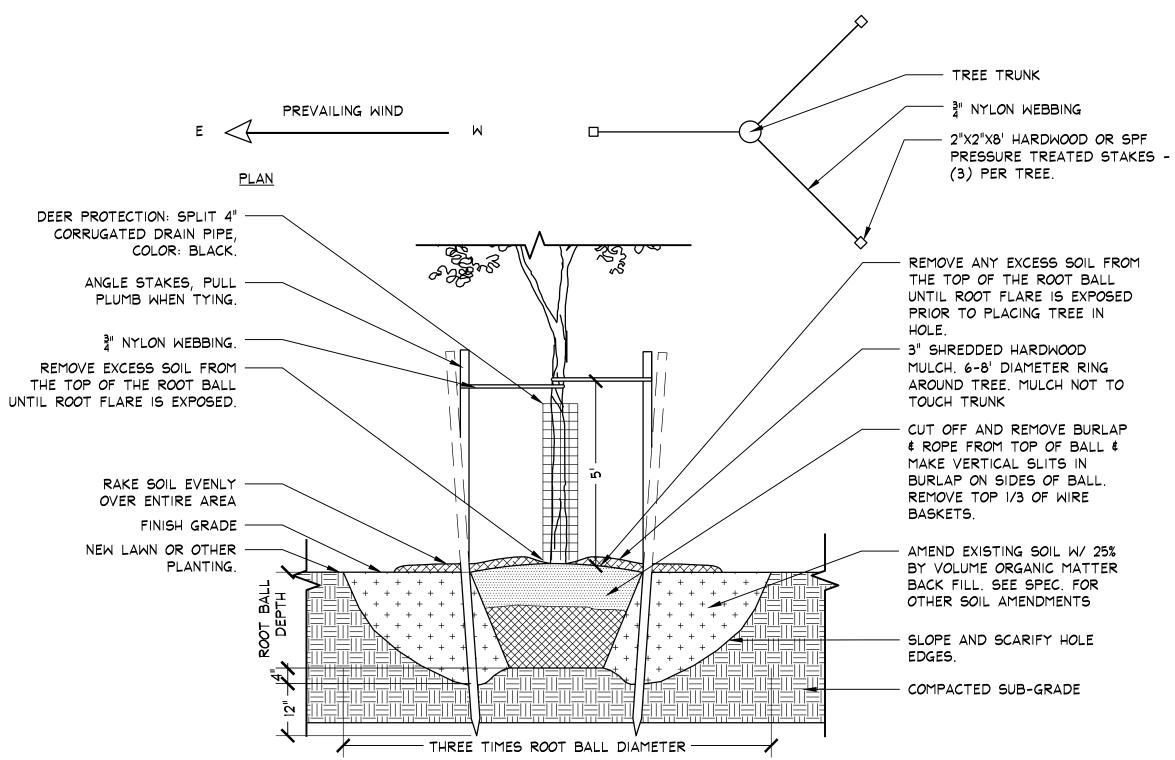
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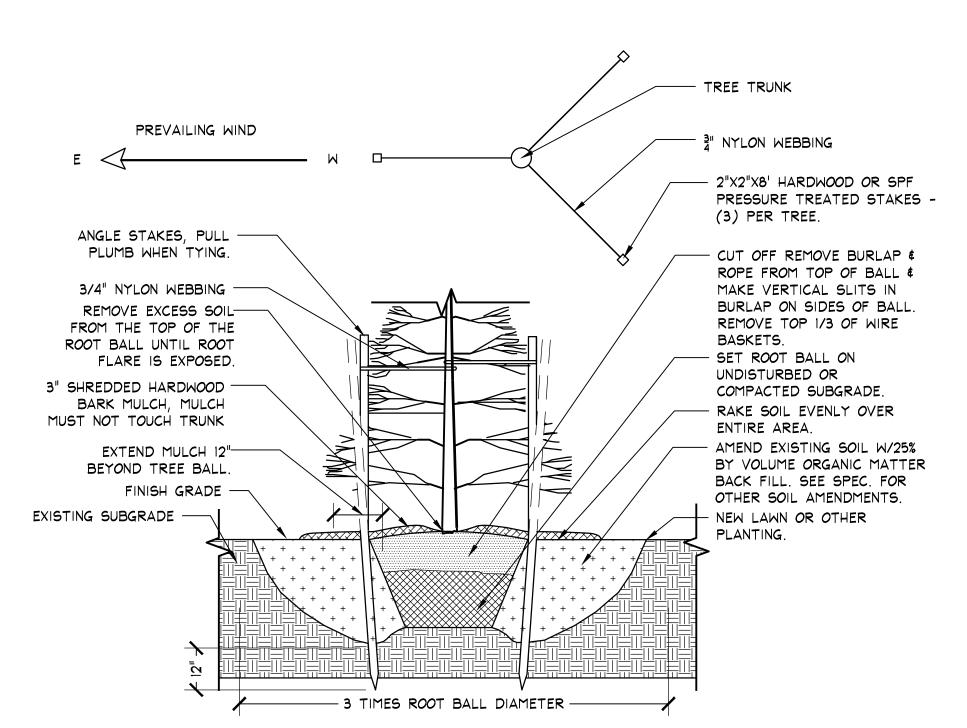


SITE PLAN DRAWING NO:



- 1. SET ALL PLANTS SO ROOT FLARE IS AT OR 1"-2" ABOVE FINISH
- GRADE. 2. THOROUGHLY TILL AREA EQUAL TO 3 TIMES THE DIAMETER OF THE ROOT BALL AND TO THE DEPTH OF THE ROOT BALL, PRIOR TO TILLING, REMOVE ANY EXISTING LAWN OR OTHER VEGETATION.
- 3. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60. 1-2004)
- 4. HANDLE THE TREE BY ROOT BALL ONLY. DO NOT LIFT USING THE TREE TRUNK AND DO NOT USE TREE TRUNK AS LEVER.
- 5. BACKFILL AROUND TREE WITH TILLED SOIL AND "WATER IN" BACKFILL IN LAYERS TO SETTLE IN BACKFILL. INSTALL BACKFILL 1" HIGHER
- THAN SURROUNDING GRADE TO ALLOW FOR SETTLEMENT. PRUNING SHALL BE LIMITED TO DEAD, DISEASED, OR BROKEN LIMBS
- ONLY AND SHALL BE IN ACCORDANCE WITH ANSI SPECIFICATIONS. 7. REMOVE ANY TRUNK WRAP REMAINING AT TIME OF PLANTING. NO
- WRAPS SHALL BE PLACED ON TRUNK. 8. REMOVE STAKES AND NYLON TIES AFTER ONE YEAR UNLESS
- OTHERWISE DIRECTED.

DECIDUOUS TREE PLANTING Not to Scale



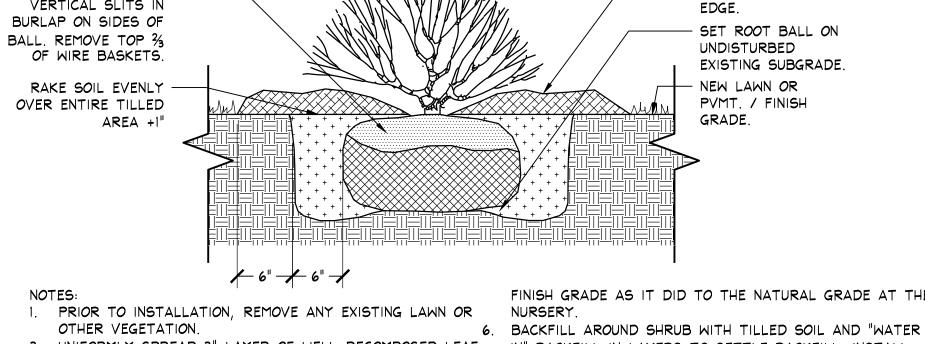
- 1. SET ALL PLANTS SO ROOT FLARE IS AT OR 1"-2" ABOVE IN" BACKFILL IN LAYERS TO SETTLE IN BACKFILL. FINISH GRADE.
- 2. THOROUGHLY TILL AREA EQUAL TO 3 TIMES THE DIAMETER OF THE ROOT BALL AND TO THE DEPTH OF THE ROOT BALL. PRIOR TO TILLING, REMOVE ANY EXISTING LAWN OR OTHER VEGETATION.
- 3. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60. 1-2004).
- 4. HANDLE THE TREE BY ROOT BALL ONLY. DO NOT LIFT USING THE TREE TRUNK AND DO NOT USE TREE TRUNK AS LEVER.
- 5. BACKFILL AROUND TREE WITH TILLED SOIL AND "WATER INSTALL BACKFILL I" HIGHER THAN SURROUNDING GRADE TO ALLOW FOR SETTLEMENT.
- PRUNING SHALL BE LIMITED TO DEAD, DISEASED, OR BROKEN LIMBS ONLY AND SHALL BE IN ACCORDANCE WITH ANSI SPECIFICATIONS.

REMOVE STAKES AND NYLON TIES AFTER ONE YEAR.

REMOVE ANY TRUNK WRAP REMAINING AT TIME OF PLANTING. NO WRAPS SHALL BE PLACED ON TRUNK. UNLESS OTHERWISE NOTED

EVERGREEN TREE PLANTING

Not to Scale



REMOVE BURLAP \$

BALL & MAKE

ROPE FROM TOP OF

VERTICAL SLITS IN

- 3. UNIFORMLY SPREAD 3" LAYER OF WELL-DECOMPOSED LEAF MULCH OR OTHER APPROVED COMPOST MATTER OVER ENTIRE AREA. TILL INTO ENTIRE AREA.
- DIAMETER THAN SHRUB BALL, AND TO DEPTH OF SHRUB BALL. PROTECT EXISTING TREE ROOTS FROM DAMAGE. 5. SET SHRUB SO IT BEARS THE SAME RELATION TO THE

FINISH GRADE AS IT DID TO THE NATURAL GRADE AT THE

IN" BACKFILL IN LAYERS TO SETTLE BACKFILL. INSTALL BACKFILL I" HIGHER THAN SURROUNDING GRADE TO ALLOW FOR SETTLEMENT.

4. THOROUGHLY TILL SHRUB PLANTING PIT 6" GREATER IN 7. CONTRACTOR HAS THE OPTION TO PREPARE ENTIRE SHRUB BED, AS DESCRIBED ABOVE, FOR LARGE SHRUB PLANTING

- 3" LAYER SHREDDED

HARDWOOD BARK MULCH -

DO NOT TOUCH STEM, AND

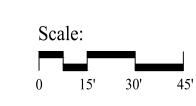
INSTALL 6" BEYOND PIT

SHRUB PLANTING

Not to Scale



1-800-362-2764 CALL TWO WORKING DAYS BEFORE YOU DIG (NON MEMBERS MUST BE CALLED DIRECTLY)



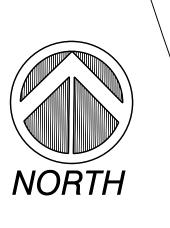


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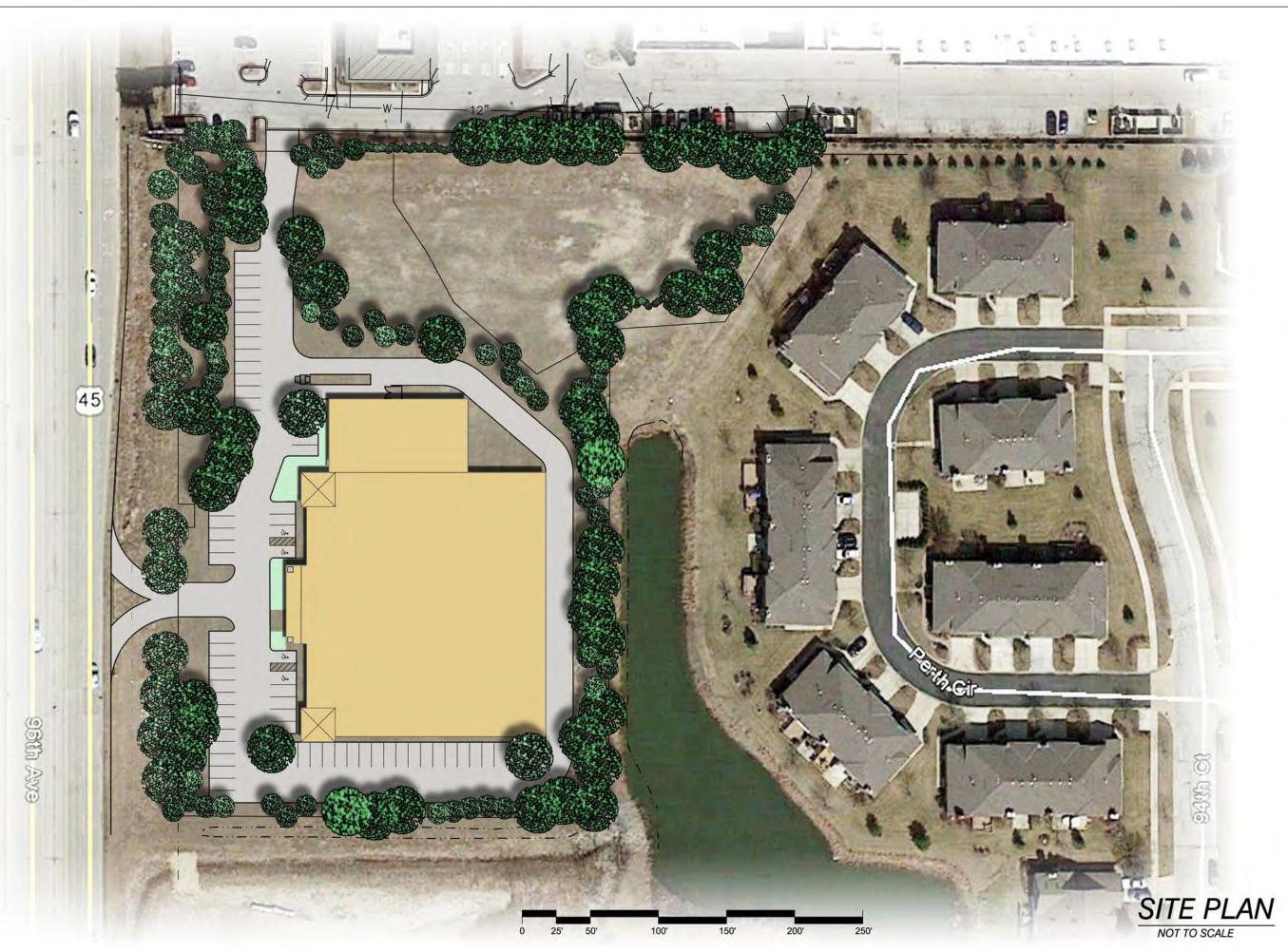
scap oad IL. LaGrange Tinley Par Grest

Drawn By DPS Checked By **Project Number**

MH



SITE PLAN DRAWING NO:



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Streetsboro, Ohio 44241
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FX: (330) 528-8000
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www.geisco.net
DATES AND REVISIONS

The Grest Escape
LaGrange Road
Tinley Park, IL.

Drawn By Checked By Project Number



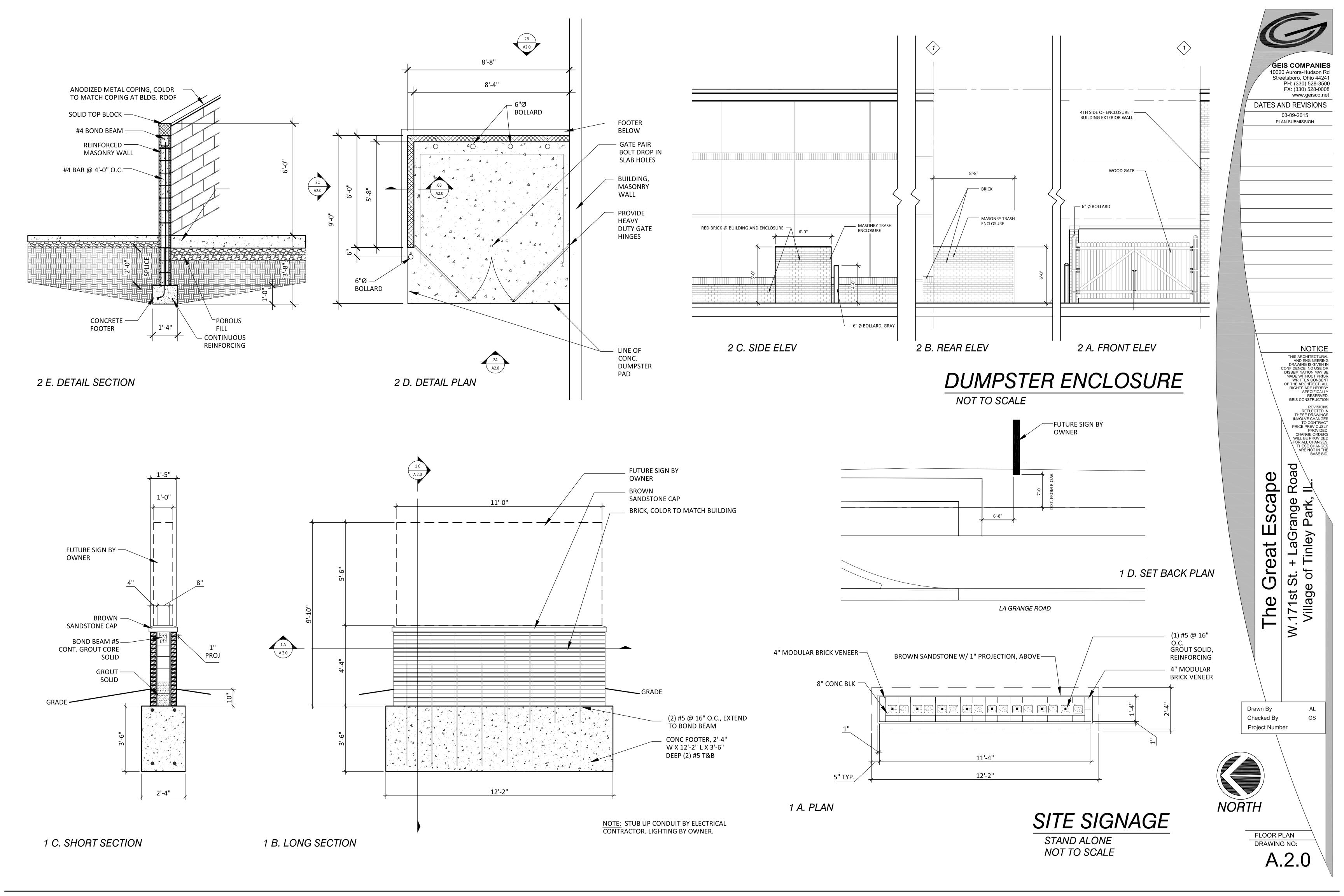
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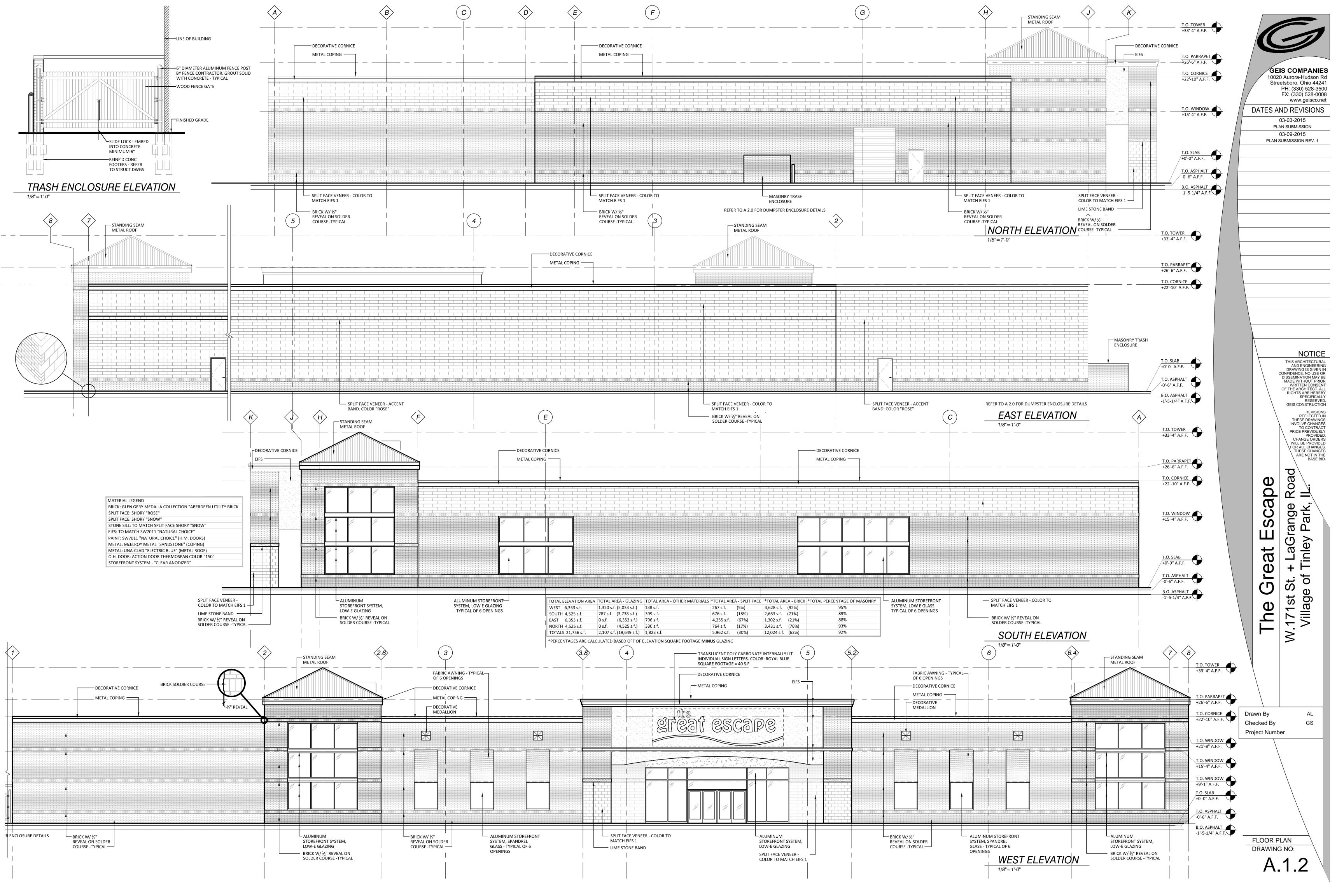
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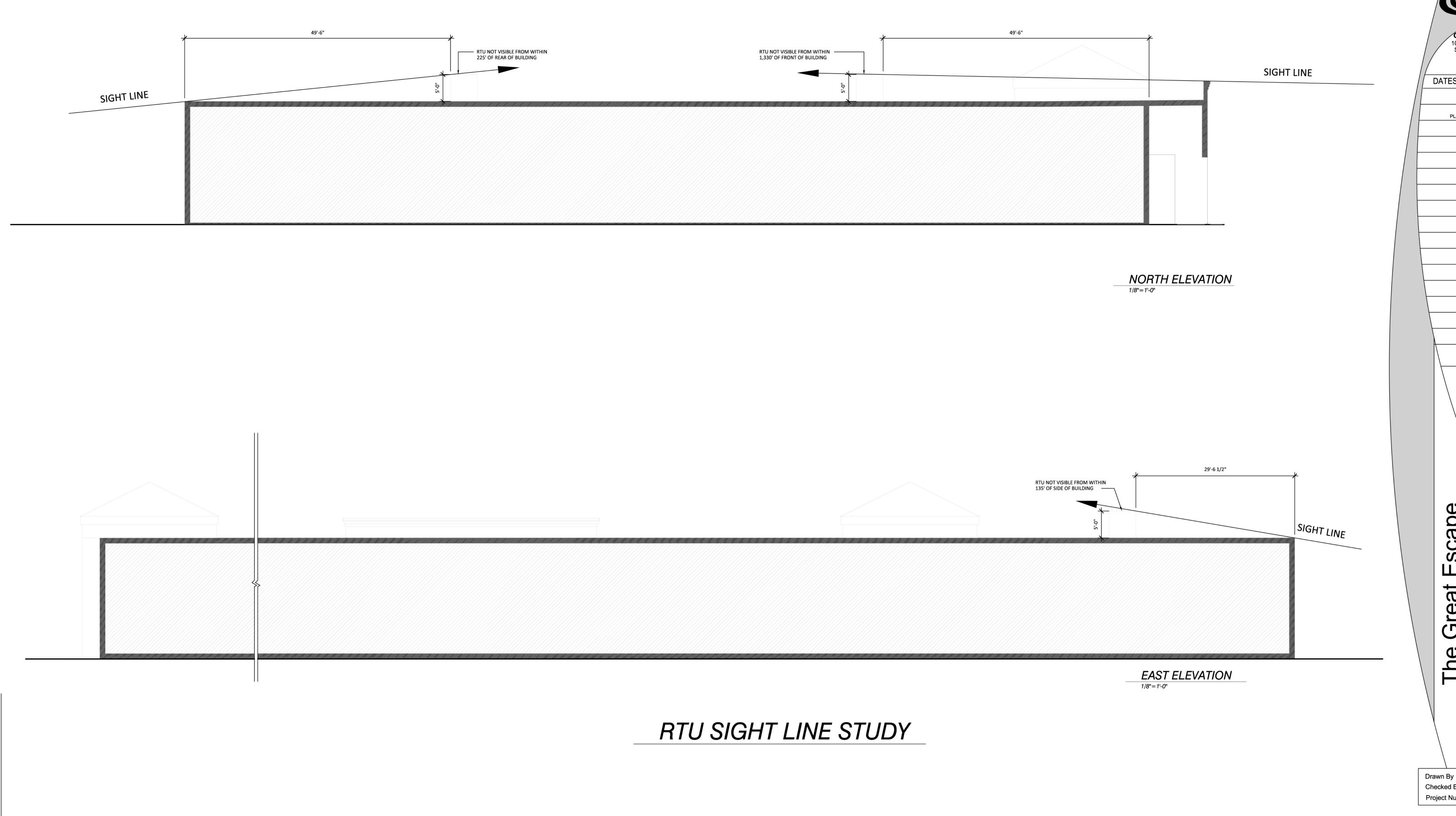








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PLAN SUBMISSION REV. 1

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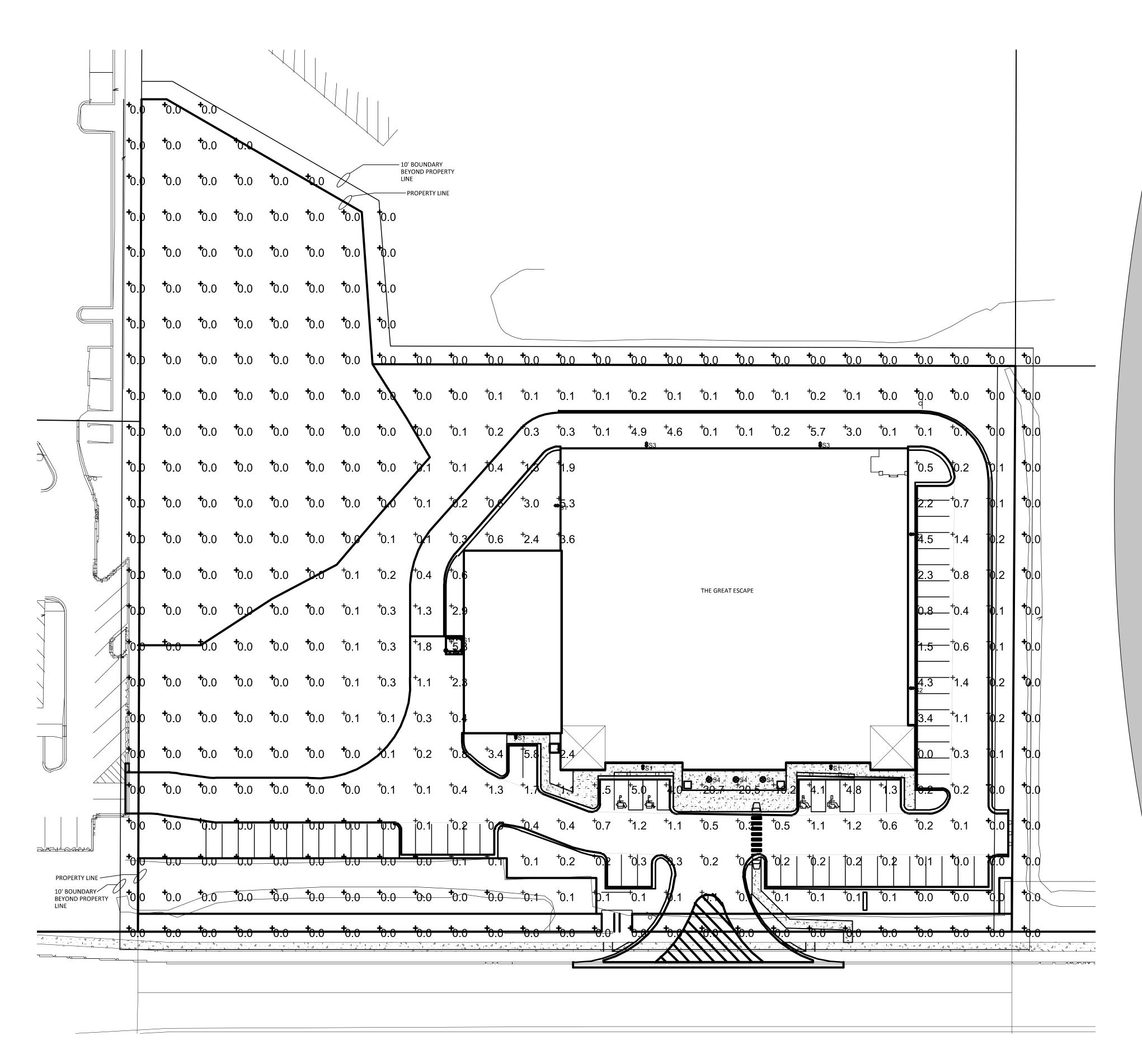
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Escape

The Great

Checked By Project Number

RTU STUDY
DRAWING NO:



			SITE LIGHTING FIXTURES					
Symbol	Туре	Mounting	Description Lamp		Fixture Watts	Volts	Part Number	Notes
	S1	SURFACE	LED WALL SCONCE	(2) LED ENGINES	110	UNV	PHILIPS GARDCO / 161-4-110LA-9635-NW-DL	OR EQUAL
	S2	SURFACE	LED WALL SCONCE	(2) LED ENGINES	74.4	UNV	PHILIPS GARDCO / 161-2-70LA-6435-NW-DL	OR EQUAL
	S3	SURFACE	LED WALL SCONCE	(2) LED ENGINES	50	UNV	PHILIPS GARDCO / 121-MT-50LA-NW	OR EQUAL
	S4	RECESSED	RECESSED DOWN LIGHT	(1) LED ENGINE	69.2	UNV	PHILIPS LIGHTOLIER / C7L50N1VBZ10V/C7L50DL35KWCLWVB	OR EQUAL

SITE PHOTOMETRIC

STAND ALONE / PHASE 1 PLAN 1" = 30'



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Village of Tinley Park, IL.

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Project Number

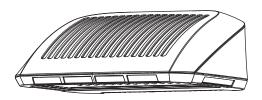


SITE PHOTOMETRIC DRAWING NO:

E.1.1

ligh performance and integrated in one luminaire

LED Wall Sconce 161



Project: GREAT ESCAPES TINLEY Location: WALLPACK Catalog No: Fixture Type: S1 Mfg:

18.5' MOUNTING HEIGHT

400W metal halide luminaire, while using considerably less energy. **Ordering** guide

example: 101-CV1-2-70LA-0433-CV1-01NIV-BNI													
Prefix Distr			stribution	Wattage		LED Type		Voltage		Finish		Options	
161-CWL				110LA-93(NW		UNIV		BRP			
161-CWL 161-MR	Sconce 161 LED 161 with motion response (120V or 277V only)	2	IES Type 3	70LA-6435	0mA 2 LED arrays, 70W 2 LED arrays,	NW	5700°K 70 CRI 4000°K 70 CRI	208 240		BRP BLP NP WP	Bronze Black Natural White	F ² PCB ²	Fusing Button photocell (not available with
161-DCC ¹	161 with dual circuit control	4	IES Type 4 distribution		110W 0m A	ww	3000°K			oc	Optional color (specify	DL	161-DCC) Diffusing lens
161-DIM	161 with 0-10V dimming controlled by others				2 LED arrays, 110W			UNIV HVU	120-277V AC 347-480V AC		optional color or RAL ex:	ws	Surface mount conduit feed
161-APD	161 with automatic profile dimming (120V thru 277V ONLY)				2 LED arrays, 170W DmA					sc	OC-LGP or RAL7024) Special color		junction box
161-APD-MRI	161 with automatic profile dimming and motion response override – integrated			150LA-6470	2 LED arrays, 150W 2 LED arrays, 220W						(specify, must supply color chip)		
	motion sensor (120V or 277V ONLY)												

- 1 For luminaires with input voltages above 277V (347, 480 or HVU) the 161-DCC is available with 110LA-9635, 170LA-9653 and 220LA-9670 LED wattages only.
- $^{\rm 2}\,$ Available 120-277V only. Provide specific input voltage.

PHILIPS GARDCO, LED WALL SCONCE 161

The Philips Gardco LED Wall Sconce 161 is an enlarged and enhanced

version of the 121, providing performance capability up to that of a

Accessories (order separarately)

• FS1R-100 - MR hand held programmer (For use with 'MR' motion response when field programming is required). If desired, only one is needed per job.

Features

- Complements the 121 wall sconce
- Perfect companion to Philips Gardco PureForm site and area luminaires
- Type 2, 3, and 4 optical distributions available
- Full cutoff performance minimizes glare and light trespass
- 10kA surge protection provided standard, meeting ANSI C62.41.2

Benefits

- Exceptional performance can reduce pole requirements on a site
- Motion response and control options available for additional energy savings
- Performance equivalent to 400W HID while utilizing less energy

example: 161-CWL-2-70LA-6435-CW-UNIV-BRP

Description

- · Housing: Die cast housing
- · Finish: Painted finish only
- Lens: Light engines will be sealed IP66 (in downlight application only). Tempered flat glass and diffuse glass lens option
- · Mounting: Wall mounted only
- Supply connection: 90°C supply wire minimum (supplied by others)
- Driver: 120-277VAC and 347-480VAC non-class 2, constant current driver 350mA and 530mA, 700mA 0-10VDC dimming
- Light engine: LEDgine 32, 48 LEDs. LEDgine optics acrylic. IES distributions 2, 3, and 4. 0% uplight (full cut-off).
- Agency approvals: UL/CUL listed for wet locations when mounted in the downlight position. All 161 luminaires equipped with NW or CW are DesignLights Consortium® aualified.



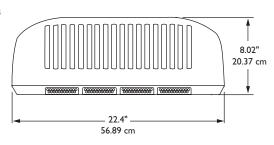


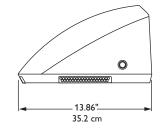
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LED Wattage and Lumen Values

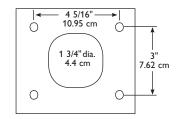
Ordering	Average System	LED Current	LED Qui	•	LED	Luminaire Initial Absolute Lumens			
Code	Watts ³	(mA)	Per LED Array	Total LEDs	Selection	TYPE 2	TYPE 3	TYPE 4	
70LA-6435	74.4	350	32	64	NW	6,815	7,105	6,890	
110LA-9635	110.0	350	48	96	NW	10,029	10,469	10,171	
110LA-6453	106.8	530	32	64	NW	9,565	9,972	9,670	
170LA-9653	158.0	530	48	96	NW	14,061	14,532	14,181	
150LA-6470	142.0	700	32	64	NW	11,957	12,466	12,087	
220LA-9670	210.0	700	48	96	NW	17,509	18,103	17,822	

Dimensions





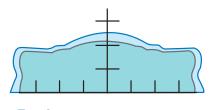
Approximate luminaire weight – 40lbs (18.15kg)

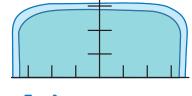


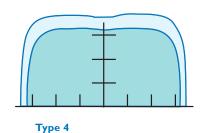
Mounting plate and bolt pattern

Note: Mounting plate center is located in the center of the luminaire width and 3.5" (8.89cm) above the luminaire bottom (lens down position). Splices must be made in the J-box (by others). Mounting plate must be secured by max. 5/16" (.79cm) diameter bolts (by others) structurally to the wall.

Distribution Options







Type 2

Type 3

LED Performance

Predicted Lumen Depreciation Data ⁴							
Ambient Temperature °C	Driver mA	L ₇₀ Hours⁵					
	350 mA	180,000					
25 °C	530 mA	150,000					
	700 mA	120,000					
	350 mA	170,000					
40 °C	530 mA	130,000					
	700 mA	100,000					

Footnotes:

- ³ Wattage may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/-10% due to actual input voltage.
- ⁴ Predicted performance derived from LED manufacturer's data and engineering design estimates.
- $^5\,$ L $_{70}$ is the predicted time when LED performance depreciates to 70% of initial lumen output.

Luminaire Configuration Information

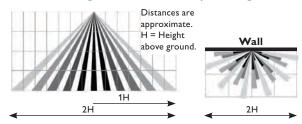
- 161-CWL: 161 LED sconce providing constant wattage and constant light output when power to the luminaire is energized.
- 161-MR: Luminaires include a passive infrared (PIR) motion sensor, WattStopper®
 FSP-211 equipped with an FS-L3W lens, capable of detecting motion within 20 feet
 of the sensor, 180° around the luminaire, when placed at a 20 foot mounting height,
 and mounted on a wall. Available in 120V or 277V input only. Motion sensor off state
 power is 0.0 watts.

In Motion Response (MR) luminaires, when no motion is detected for 10 minutes, the Motion Response system reduces the wattage by 90%, to 10% of the normal constant wattage, reducing the light level accordingly. When motion is detected by the PIR, the luminaire returns to full wattage and full light output. Dimming on low is factory set to 10% with duration set at 10 minutes.

The approximate motion sensor coverage pattern is as shown below.

Side Coverage Pattern

Top Coverage Pattern



• FS1R-100 Wireless Remote Programming Tool:

The FS1R-100 Remote Programming Tool accessory permits adjustment of 161-MR sensor settings, including duration and dimming level on low, without the need to connect any wires to the luminaire.

The FS1R-100 Wireless IR Programming Tool is a handheld tool for setup and testing of WattStopper FSP-211. It provides wireless access to the FSP-211 sensors for setup and parameter changes.

The FS1R-100 display shows menus and prompts to lead you through each process. The navigation pad provides a familiar way to navigate through the customization fields.

Within a certain mounting height of the sensor, the FS1R-100 allows modification of the system without requiring ladders or tools simply with a touch of a few buttons.

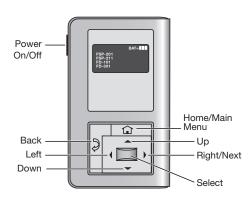
The FS1R-100 IR transceiver allows bi-directional communication between the FSP-211 and the FS1R-100 programming tool . Simple menu screens let you see the current status of the system and make changes. It can change FSP-211 sensor parameters such as high/low mode, sensitivity, time delay, cut off and more. With the FS1R-100 you can also establish and store FSP-211 parameter profiles.

The FS1R-100 operates on three standard 1.5V AAA Alkaline batteries or three rechargeable AAA NiMH batteries. The battery status displays in the upper right corner of the display. Three bars next to BAT= indicates a full battery charge. A warning appears on the display when the battery level falls below a minimum acceptable level. To conserve battery power, the FS1R-100 automatically shuts off 10 minutes after the last key press.



You navigate from one field to another using (up) or (down) arrow keys. The active field is indicated by flashing (alternates between yellow text on black background and black text on yellow background.)

Once active, use the Select button to move to a menu or function within the active field. Value fields are used to adjust parameter settings. They are shown in "less-than/greater-than" symbols: <value>. Once active, change them using (left) and (right) arrow keys. In general the up key increments and the down key decrements a value. Selections wrap-around if you continue to press the key beyond maximum or minimum values. Moving away from the value field overwrites the original value. The Home button takes you to the main menu. The Back button can be thought of as an undo function. It takes you back one screen. Changes that were in process prior to pressing the key are lost.



More information on the FS1R-100 Remote Programming Tool is available at wattstopper.com.

The FS1R-100 Wireless Remote Programming Tool can be used to adjust sensor settings on 161-MR luminaires ONLY. It cannot be used to adjust sensor settings on the 161-APD-MRI.

- 161-DCC: 161 LED sconce provided with dual circuiting, permitting separate switching of each LED array. Note, for luminaires with input voltages above 277V (347, 480 or HVU) the 161-DCC is available with 110LA-9635, 170LA-9653 and 220LA-9670 LED wattages only.
- 161-DIM: 161 LED sconce provided with 0-10V dimming for connection to a control system provided by others.
- 161-APD: 161 LED sconces with Automatic Profile Dimming. are provided with a
 programmable driver, programmed to go to 50% power, 50% light output two (2)
 hours prior to night time mid-point and remain at 50% for six (6) hours after night
 time mid-point. Mid-point is continuously recalculated by the programmable driver
 based on the average mid-point of the last two full night cycles. Short duration
 cycles, and power interruptions are ignored and do not affect the determination of
 mid-point.

161-APD is available in 120V through 277V input only.

APD Dimming Profile:



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Luminaire Configuration Information

 161 - APD- MRI: 161 wall sconce with Automatic Profile Dimming and Motion Response Override (with integral motion sensor) combines the benefits of both automatic profile dimming and motion response. The luminaire will dim to 50% power, 50% light output, per the dimming profile shown for the 161-APD. If motion is detected during the time that the luminaire is operating at 50%, the luminaire returns to 100% power and light output. The luminaire remains on high until no motion is detected for the duration period, after which the luminaire returns to low. Duration period is factory set at 10 minutes.

APD-MRI luminaires are available with 120V or 277V input voltages only. APD-MRI luminaires use the identical motion sensor as MR luminaires.

Additional Specifications

General Description

The Philips Gardco LED Wall Sconce 161 is an enlarged and enhanced version of the 121, providing performance capability up to that of a 400W metal halide luminaire, while using considerably less energy.

Housing

Housing constructed of die-cast aluminum.

IP Rating

LED light engine rated IP66 (in downlight application only).

Optical Systems

IES Type 2, 3 and 4 distributions available. 0% uplight (full cut-off).

Listings

UL/CUL listed for wet locations when mounted in the downlight position. All 161 luminaires equipped with NW or CW are DesignLights Consortium $^{\!0}$ qualified.

Finisl

Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors are as listed. Consult factory for specs on custom colors.

Warranty

161 Luminaires feature a 5 year limited warranty. LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer.



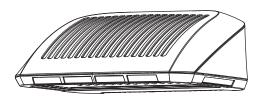
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2 Si

Philips Lighting Company 200 Franklin Square Drive Somerset, NJ 08873 Phone: 855-486-2216 Philips Lighting Company 281 Hillmount Road Markham ON, Canada L6C 2S3 Phone: 800-668-9008

High performance and integrated style, all in one luminaire

LED Wall Sconce 161







Project: GREAT ESCAPES TINLEY Location: WALL PACK

Catalog No:

Fixture Type: S2

Tixture Type.

Mfg:

18.5' MOUNTING HEIGHT

example: 161-CWL-2-70LA-6435-CW-UNIV-BRP

PHILIPS GARDCO, LED WALL SCONCE 161

The Philips Gardco LED Wall Sconce 161 is an enlarged and enhanced version of the 121, providing performance capability up to that of a 400W metal halide luminaire, while using considerably less energy.

Ordering guide

Prefix		Di	stribution	Wattage		LED 1	Гуре	Voltag	ge	Finish	ı	Optio	ns
161-CWI]	2		70LA-6	43	NW	<i>'</i>	UN	V	BR	Р		
161-CWL	Sconce 161 LED	2	IES Type 2	350	mA	cw	5700°K	120		BRP	Bronze	F ²	Fusing
161-MR	161 with motion		distribution	70LA-6435	2 LED arrays,		70 CRI	208		BLP	Black	PCB ²	Button
	response (120V or	3	IES Type 3		70W	NW	4000°K	240		NP	Natural		photocell (not
	277V only)		distribution	110LA-9635	2 LED arrays,		70 CRI	277		WP	White		available with
161-DCC1	161 with dual circuit	4	IES Type 4		110W	ww	3000°K	347		oc	Optional		161-DCC)
	control		distribution	530	mA		70 CRI	480			color (specify	DL	Diffusing lens
161-DIM	161 with 0-10V dimming			110LA-6453	2 LED arrays,			UNIV	120-277V AC		optional color	WS	Surface mount
	controlled by others				110W			HVU	347-480V AC		or RAL ex:		conduit feed
161-APD	161 with automatic			170LA-9653	2 LED arrays,						OC-LGP or		junction box
	profile dimming (120V				170W						RAL7024)		
	thru 277V ONLY)			700	mA					sc	Special color		
161-APD-MRI	161 with automatic			150LA-6470	2 LED arrays,						(specify, must		
	profile dimming and				150W						supply color		
	motion response			220LA-9670	2 LED arrays,						chip)		

Footnotes

1 For luminaires with input voltages above 277V (347, 480 or HVU) the 161-DCC is available with 110LA-9635, 170LA-9653 and 220LA-9670 LED wattages only.

220W

 $^{\rm 2}\,$ Available 120-277V only. Provide specific input voltage.

override – integrated motion sensor (120V or 277V ONLY)

Accessories (order separarately)

• FS1R-100 – MR hand held programmer (For use with 'MR' motion response when field programming is required). If desired, only one is needed per job.

Features

- Complements the 121 wall sconce
- Perfect companion to Philips Gardco PureForm site and area luminaires
- Type 2, 3, and 4 optical distributions available
- Full cutoff performance minimizes glare and light trespass
- 10kA surge protection provided standard, meeting ANSI C62.41.2

Benefits

- Exceptional performance can reduce pole requirements on a site
- Motion response and control options available for additional energy savings
- Performance equivalent to 400W HID while utilizing less energy

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Description

- Housing: Die cast housing
- Finish: Painted finish only
- Lens: Light engines will be sealed IP66 (in downlight application only). Tempered flat glass and diffuse glass lens option
- Mounting: Wall mounted only
- Supply connection: 90°C supply wire minimum (supplied by others)
- Driver: 120-277VAC and 347-480VAC non-class 2, constant current driver 350mA and 530mA, 700mA 0-10VDC dimming
- Light engine: LEDgine 32, 48 LEDs. LEDgine optics acrylic. IES distributions 2, 3, and 4. 0% uplight (full cut-off).
- Agency approvals: UL/CUL listed for wet locations when mounted in the downlight position. All 161 luminaires equipped with NW or CW are DesignLights Consortium[®] qualified.

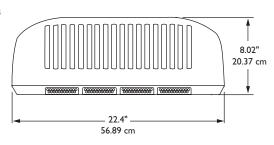


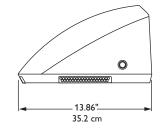


LED Wattage and Lumen Values

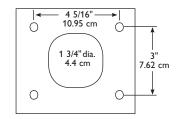
Ordering	Average System	LED Current	LED Qui	•	LED	Luminaire Initial Absolute Lumens			
Code	Watts ³	(mA)	Per LED Array	Total LEDs	Selection	TYPE 2	TYPE 3	TYPE 4	
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110LA-6453	106.8	530	32	64	NW	9,565	9,972	9,670	
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150LA-6470	142.0	700	32	64	NW	11,957	12,466	12,087	
220LA-9670	210.0	700	48	96	NW	17,509	18,103	17,822	

Dimensions





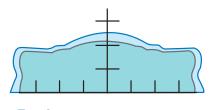
Approximate luminaire weight – 40lbs (18.15kg)

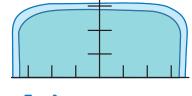


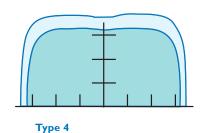
Mounting plate and bolt pattern

Note: Mounting plate center is located in the center of the luminaire width and 3.5" (8.89cm) above the luminaire bottom (lens down position). Splices must be made in the J-box (by others). Mounting plate must be secured by max. 5/16" (.79cm) diameter bolts (by others) structurally to the wall.

Distribution Options







Type 2

Type 3

LED Performance

Predicted Lumen Depreciation Data ⁴							
Ambient Temperature °C	Driver mA	L ₇₀ Hours⁵					
	350 mA	180,000					
25 °C	530 mA	150,000					
	700 mA	120,000					
	350 mA	170,000					
40 °C	530 mA	130,000					
	700 mA	100,000					

Footnotes:

- ³ Wattage may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/-10% due to actual input voltage.
- ⁴ Predicted performance derived from LED manufacturer's data and engineering design estimates.
- $^5\,$ L $_{70}$ is the predicted time when LED performance depreciates to 70% of initial lumen output.

Luminaire Configuration Information

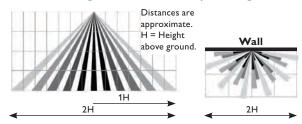
- 161-CWL: 161 LED sconce providing constant wattage and constant light output when power to the luminaire is energized.
- 161-MR: Luminaires include a passive infrared (PIR) motion sensor, WattStopper®
 FSP-211 equipped with an FS-L3W lens, capable of detecting motion within 20 feet
 of the sensor, 180° around the luminaire, when placed at a 20 foot mounting height,
 and mounted on a wall. Available in 120V or 277V input only. Motion sensor off state
 power is 0.0 watts.

In Motion Response (MR) luminaires, when no motion is detected for 10 minutes, the Motion Response system reduces the wattage by 90%, to 10% of the normal constant wattage, reducing the light level accordingly. When motion is detected by the PIR, the luminaire returns to full wattage and full light output. Dimming on low is factory set to 10% with duration set at 10 minutes.

The approximate motion sensor coverage pattern is as shown below.

Side Coverage Pattern

Top Coverage Pattern



• FS1R-100 Wireless Remote Programming Tool:

The FS1R-100 Remote Programming Tool accessory permits adjustment of 161-MR sensor settings, including duration and dimming level on low, without the need to connect any wires to the luminaire.

The FS1R-100 Wireless IR Programming Tool is a handheld tool for setup and testing of WattStopper FSP-211. It provides wireless access to the FSP-211 sensors for setup and parameter changes.

The FS1R-100 display shows menus and prompts to lead you through each process. The navigation pad provides a familiar way to navigate through the customization fields.

Within a certain mounting height of the sensor, the FS1R-100 allows modification of the system without requiring ladders or tools simply with a touch of a few buttons.

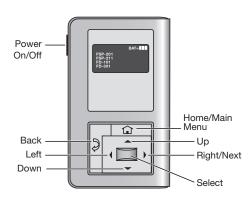
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The FS1R-100 operates on three standard 1.5V AAA Alkaline batteries or three rechargeable AAA NiMH batteries. The battery status displays in the upper right corner of the display. Three bars next to BAT= indicates a full battery charge. A warning appears on the display when the battery level falls below a minimum acceptable level. To conserve battery power, the FS1R-100 automatically shuts off 10 minutes after the last key press.



You navigate from one field to another using (up) or (down) arrow keys. The active field is indicated by flashing (alternates between yellow text on black background and black text on yellow background.)

Once active, use the Select button to move to a menu or function within the active field. Value fields are used to adjust parameter settings. They are shown in "less-than/greater-than" symbols: <value>. Once active, change them using (left) and (right) arrow keys. In general the up key increments and the down key decrements a value. Selections wrap-around if you continue to press the key beyond maximum or minimum values. Moving away from the value field overwrites the original value. The Home button takes you to the main menu. The Back button can be thought of as an undo function. It takes you back one screen. Changes that were in process prior to pressing the key are lost.



More information on the FS1R-100 Remote Programming Tool is available at wattstopper.com.

The FS1R-100 Wireless Remote Programming Tool can be used to adjust sensor settings on 161-MR luminaires ONLY. It cannot be used to adjust sensor settings on the 161-APD-MRI.

- 161-DCC: 161 LED sconce provided with dual circuiting, permitting separate switching of each LED array. Note, for luminaires with input voltages above 277V (347, 480 or HVU) the 161-DCC is available with 110LA-9635, 170LA-9653 and 220LA-9670 LED wattages only.
- 161-DIM: 161 LED sconce provided with 0-10V dimming for connection to a control system provided by others.
- 161-APD: 161 LED sconces with Automatic Profile Dimming. are provided with a
 programmable driver, programmed to go to 50% power, 50% light output two (2)
 hours prior to night time mid-point and remain at 50% for six (6) hours after night
 time mid-point. Mid-point is continuously recalculated by the programmable driver
 based on the average mid-point of the last two full night cycles. Short duration
 cycles, and power interruptions are ignored and do not affect the determination of
 mid-point.

161-APD is available in 120V through 277V input only.

APD Dimming Profile:



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Luminaire Configuration Information

 161 - APD- MRI: 161 wall sconce with Automatic Profile Dimming and Motion Response Override (with integral motion sensor) combines the benefits of both automatic profile dimming and motion response. The luminaire will dim to 50% power, 50% light output, per the dimming profile shown for the 161-APD. If motion is detected during the time that the luminaire is operating at 50%, the luminaire returns to 100% power and light output. The luminaire remains on high until no motion is detected for the duration period, after which the luminaire returns to low. Duration period is factory set at 10 minutes.

APD-MRI luminaires are available with 120V or 277V input voltages only. APD-MRI luminaires use the identical motion sensor as MR luminaires.

Additional Specifications

General Description

The Philips Gardco LED Wall Sconce 161 is an enlarged and enhanced version of the 121, providing performance capability up to that of a 400W metal halide luminaire, while using considerably less energy.

Housing

Housing constructed of die-cast aluminum.

IP Rating

LED light engine rated IP66 (in downlight application only).

Optical Systems

IES Type 2, 3 and 4 distributions available. 0% uplight (full cut-off).

Listings

UL/CUL listed for wet locations when mounted in the downlight position. All 161 luminaires equipped with NW or CW are DesignLights Consortium $^{\!0}$ qualified.

Finisl

Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors are as listed. Consult factory for specs on custom colors.

Warranty

161 Luminaires feature a 5 year limited warranty. LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer.



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2 Si

Philips Lighting Company 200 Franklin Square Drive Somerset, NJ 08873 Phone: 855-486-2216 Philips Lighting Company 281 Hillmount Road Markham ON, Canada L6C 2S3 Phone: 800-668-9008 Job: GREAT ESCAPES TINLEY PARK

Type: S3

Notes: 18.5' MOUNTING HEIGHT

120 LINE LED

Page 1 of 4

121 LED Performance Sconce - Generation 2

The Philips Gardco 121 LED Performance Sconce provides an energy efficient, architecturally pleasing solution for wall mount applications. The sloped surface ribs of the die cast aluminum housing create a distinctly unique aesthetic element, and perform important functions in the Philips Gardco thermal management system. 121 Generation 2 luminaires feature high performance Class 1 LED systems. The high performance LED optical systems produce full cutoff performance, minimizing glare and light trespass. Philips Gardco's LED technology provides maximized light output and maximum energy savings.



PREFIX	OPTICAL SYSTEM	I LED WATTAG	E LED SELEC	CTION VOL	TAGE	FINISH	OPTIONS
121	MT ▼	50LA [NW	UNIV	BRP		
Enter the order code into the Refer to notes below for ex					combinations and config	gurations are valid.	

PREFIX OPTICAL SYSTEM

121 LED Performance Sconce - Constant Wattage / Full Light Output 2 Type 2 All optical systems are supplied with a clear glass lens standard. A Diffuse Lens (DL) option is available, 121-MR 121 LED Performance Sconce - Motion Response 3 Type 3 See **OPTIONS** on Page 2. 121-DIM 121 LED Performance Sconce - 0 - 10V Dimming 4 Type 4 MT Medium Throw 121-APD 121 LED Performance Sconce - Automatic Profile Dimming

121-DCC 121 LED Performance Sconce - Dual Circuit Control

LED WATTAGE AND LUMEN VALUES

Single LED A	Single LED Array Wattages, Available in 121, 121-MR, 121-DIM and 121-APD Only									
Oudouina	Average	LED	LED Quantitus	LED	Luminaire Initial Absolute Lumens ²					
Ordering Code	System Watts ¹	Current (mA)	LED Quantity - Single LED Array	Selection	TYPE 2	TYPE 3	TYPE 4	МТ		
18LA	18	350	16	NW	1,673	1,707	1,609	2,022		
26LA	26	530	16	NW	2,442	2,485	2,345	2,927		
35LA-700	36	700	16	NW	3,102	3,139	2,972	3,650		
35LA-350	35	350	32	NW	3,664	3,736	3,523	4,425		
50LA	52	530	32	NW	5,587	5,685	5,365	6,697		
75LA	72	700	32	NW	6,199	6,538	6,296	7,289		

Dual LED A	al LED Array Wattages, Available in 121-DCC Only										
Ordering Code	Average	LED Current	LED Qui Dual LED	,	LED	Luminaire Initial Absolute Lumens ²					
Code	System Watts ¹	(mA)	Per LED Array	Total LEDs	Selection TYPE 2	TYPE 3	TYPE 4	МТ			
35LA-2	35	350	16	32	NW	3664	3,736	3,523	4,425		
50LA-2	52	530	16	32	NW	5587	5,685	5,365	6,697		
75LA-2	72	700	16	32	NW	6199	6,538	6,296	7,289		

^{1.} Wattage may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.

^{2.} Values shown are for luminaires without the DL option. Tests are in process for configurations not shown. "(s)" following the value indicates that values are scaled from tests on similar, but not identical luminaire configurations. Contact Gardco.applications@ philips.com if any approximate estimates are required for design purposes. Lumen values based on tests performed in compliance with IESNA LM-79.





Page 2 of 4

121 LED Performance Sconce - Generation 2

LED SELECTION

VOLTAGE

CW	Cool White - 5700°K - 75 CRI Nominal
NW	Neutral White - 4000°K - 70 CRI Nominal
ww	Warm White - 3000°K - 80 CRI Nominal

> UNIV Accepts 120V through 277V input, 50hz to 60hz. 347

347V - Requires Extended Back Box, which is provided standard. Requires and includes auxilliary transformer mounted in Extended Back Box.

FINISH

BGP

OC

OPTIONS

BRP Bronze Paint BLP Black Paint WP White Paint

DL **PCB** WS **EBB**

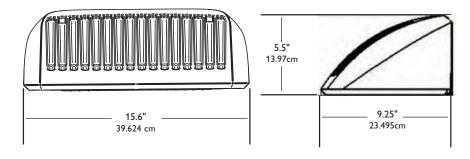
Natural Aluminum Paint Beige Paint Optional Color Paint

Specify Optional Color or RAL ex: OC-LGP or OC-RAL7024.

SC Special Paint Specify. Must supply color chip. F Fusing (Provide specific inpout voltage)

> Solite Diffusing Glass Lens (Reduces performance significantly.) Button Type Photocontrol (Provide specific inpout voltage) Wall Mounted Box for Surface Conduit (Rear entry permitted.) Extended Back Box (Provided standard with 347V luminaires.)

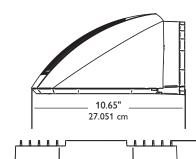
DIMENSIONS



3 1/8" 7.94 cm 3 1/8" 7.94 cm 1 3/4" dia. 4.4 cm \bigcirc

Mounting Plate

With Extended Back Box (EBB) Option



Top View

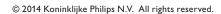
15.6" 39.624 cm

Note: Mounting plate center is located in the center of the luminaire width and 2.38" (6.03cm) above the luminaire bottom (lens down position). Splices must be made in the J-box (by others). Mounting plate must be secured by max. 5/16" (.79cm) diameter bolts (by others) structurally to the wall.

> A = 1.49" 3.785 cm

10.65" 27.051 cm

Mounting Bolt Pattern



Page 3 of 4

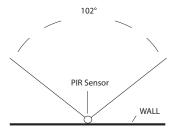
121 LED Performance Sconce - Generation 2

LUMINAIRE CONFIGURATION INFORMATION

121-CWL: 121 LED sconce providing constant wattage and constant light output when power to the luminaire is energized.

121-MR: 121 LED sconce including a passive infrared (PIR) motion sensor capable of detecting motion within 30 feet of the 121 LED Sconce. The PIR sensor is mounted in the center of the luminaire, near the wall edge of the door frame, approximately 1.5" forward from the wall, and is less than .75" in diameter. When no motion is detected for 5 minutes, the Motion Response system reduces the wattage by 75%, to 25% of the normal constant wattage, reducing the light level accordingly. When motion is detected by the PIR, the luminaire returns to full wattage and full light output. The PIR sensor is capable of motion detection across a total angle of 102° from the center of the sensor (51° to either side of center.) The sensor may be adjusted directionally to maximize detection of motion to one side of the luminaire if desired based on site traffic patterns. PIR sensor provided is the Panasonic EKMB1203112. If the PIR sensor fails, the luminaire will operate in default-high mode. Motion sensors utilized consume 0.0 watts in the off state.

Sensor Coverage Pattern



121-DIM: 121 LED sconce provided with 0 -10V dimming for connection to a control system provided by others.

121-APD: Philips Gardco performance LED sconces with Automatic Profile Dimming are provided with the Philips DynaDimmer included. The DynaDimmer is factory programmed to go to 50% power, 50% light output two (2) hours prior to night time mid-point and remain at 50% for six (6) hours after night time mid-point. Mid-point is continuously calculated by the DynaDimmer based on the average mid-point of the last two full night cycles. Short duration cycles, and power interruptions are ignored and do not affect the determination of mid-point.

APD Dimming Profile



121-DCC: 121 LED sconce provided with dual circuiting, and dual arrays, permitting separate switching of each led array. Available in LED wattages shown on Page 1 only.

121 LED Performance Sconce - Generation 2

SPECIFICATIONS

GENERAL: Each Philips Gardco 121 luminaire is a wall mounted full cutoff luminaire with integrated lensed LEDs mounted in a fixed array. Internal components are totally enclosed in a rain-tight, dust-tight and corrosion resistant housing. The housing, back plate and door frame are die cast aluminum. A choice of four (4) optical systems is available. Luminaires are suitable for wet locations, mounted in the normal downlight position.

HOUSING: The single-piece stylized housing is die cast aluminum. A memory retentive gasket seals the housing with the door frame to exclude moisture, dust, insects and pollutants from the luminaire. A black, die cast ribbed backplate is included.

IP RATING: Luminaires are rated IP66.

DOOR FRAME: A single-piece die cast aluminum door frame integrates to the housing form. The door frame is hinged closed and secured to the housing with two (2) captive stainless steel fasteners.

OPTICAL SYSTEMS: Philips Gardco 121 Generation 2 LED luminaires utilize lensed LED arrays set to achieve IES Type II, Type III, and Type IV distributions, as well as a Medium Throw distribution. Individual LED arrays are replaceable. Luminaires feature high performance Class 1 LED systems. Luminaires are supplied standard with a clear glass lens.

ELECTRICAL: Luminaires are equipped with an LED driver that accepts 120V through 277V, 50hz to 60hz, input. Driver output is either 350 mA, 530 mA or 700 mA, based on the LED wattage selected. Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600 VAC at 302°F/150°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. Power factor is not less than 90%. Luminaires consume 0.0 watts in the off state. Surge protector standard. 10KA per AN SI/IEEE C62.41.2.

LED THERMAL MANAGEMENT: The 121 design provides deep integral thermal radiation fins cast into the upper housing to assist in the thermal management so critical to long LED system life. Metallic screens are placed over the fins and integrated to the housing to prevent the buildup of dust, dirt and contaminants, while permitting required air flow for cooling

LED PERFORMANCE:

PREDICTED	LUMEN DEPRECI	ATION DATA⁴
Ambient Temperature °C	Driver mA	L ₇₀ Hours ⁵
	350 mA	180,000
25 °C	530 mA	150,000
	700 mA	120,000
	350 mA	170,000
40 °C	530 mA	130,000
	700 mA	100,000

4. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.

 $5.L_{70}$ is the predicted time when LED performance depreciates to 70% of initial lumen output.

FINISH: Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors include bronze (BRP), black (BLP), white (WP), natural aluminum (NP) and beige (BGP). Consult factory for specifications on custom colors.

LABELS: All luminaires bear either UL or CUL (where applicable) Wet Location labels.

WARRANTY: Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays and LED drivers. See Warranty Information on www.sitelighting.com for complete details and exclusions.

FULL CUTOFF PERFORMANCE: Full cutoff performance means a luminaire distribution where zero candela intensity occurs at an angle at or above 90° above nadir . Additionally, the candela per 1000 lamp lumens does not numerically exceed 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.



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Philips Lighting North America Corporation 200 Franklin Square Drive Somerset, NJ 08873 Tel. 855-486-2216 Imported by: Philips Lighting, A division of Philips Electronics Ltd. 281 Hillmount Rd, Markham, ON, Canada L6C 2S3 Tel. 800-668-9008

C7L1520DL (M)

Calculite LED 7" Downlight Medium Beam

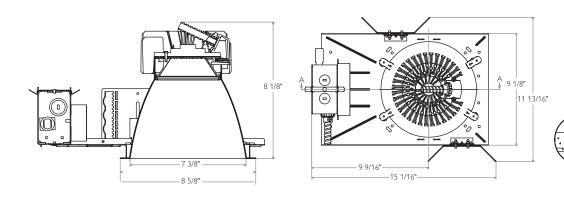
Page 1 of 3

Flangeless Trim with Plaster Ring Accessory CA7FMR (Recommended for gypsum installations)

Catalog number: C7L50N1VBZ10/C7L50DL35KWCLWVB

Notes: 15' MOUNTING HEIGHT

Туре: \$4



Ordering Guide: Light Engines

Light Engine Series	Style	Color Temperature	Beam Spread	Reflector Finish	Flange	Options
C7L1520	DL (Downlight)	27K (2700K) 30K (3000K) 35K (3500K) 40K (4000K)	M (Medium beam, 0.9 s.c.)	CL (Clear) CCL (Comfort Clear) CCD (Comfort Clear Diffuse) CCZ (Champagne Bronze) WH (Painted White)	W (Painted white) P (Aperture-matching/ polished) FT (Flush-mount/ flangeless)¹	EM (Integral emergency test switch)

Example: C7L1520DL35KMCCLWEM

 $^{1}\!\text{Accessory}$ CA7FMR recommended for gypsum applications. Reflector flange is 1/8".

Ordering Guide: Frame-in Kits

Frame-in Kit Series	Installation Options	Input Voltage	Options
C7L15 (1500 Lumen) C7L20 (2000 Lumen) C7L35 (3500 Lumen)	N (New construction) R (Remodeler for 1500 and 2000 lumen only)	1 (120V) 2 (277V)	Blank (0-10 volt dimming) EM (Emergency for 1500 and 2000 lumen only)
CUL15 (1500 Lumen) CUL20 (2000 Lumen)	J (J-box mount retrofit) S (Screw-in base retrofit (120V only))	1 (120V) 2 (277V)	Blank (0-10 volt dimming)

Example: C7L15N1EM

Features

Aperture: 7 3/8" (187mm) I.D., 8 5/8" (219mm) O.D.

Input Wattage: 27W (1500 Lumens), 39W (2000 Lumens), 60W (3500 Lumens). **Reflector Cone:** Aluminum. Provides 50° cutoff to source & source image. Self-flanged.

Depth (including Frame-in kit): 8 1/8" (206mm)

Power Connection: Attaches to frame-in kit via push-in connector (on frame). Removable cover provides access.

Technology

LED Board: Array of 22 high brightness royal blue LED's.

Remote Phosphor Technology: Remote phosphor technology provides increased efficiency and color consistency. Phosphor lens assembly positioned in front of LED array converts blue light to white. Color shift will not exceed +/-100K over life.

Optical Mixing Chamber: Lightolier-specific mixing chamber redirects back-reflected light through aperture resulting in 20% increase in efficiency.

Thermal Management: Heat sink and thermal design along with clean room assembly ensures specified performance.

Technology (continued)

Rated Life: Based on IESNA LM-80-2008

1500 Lumen -60,000 hours at 70% lumen maintenance. 2000 Lumen -57,000 hours at 70% lumen maintenance. 3500 Lumen -35,000 hours at 70% lumen maintenance.

Photometric Performance: Tested in accordance to IESNA LM-79-2008

Options

Dimming Capability: 0-10V. See LED-DIM specification sheet

Emergency Capability (Integral): Add "EM" suffix. See LED-EM spec sheet.

Emergency Capability (Inverter): See LED-LMI specification sheet

Labels

UL (suitable for wet locations), cUL, I.B.E.W. 5 Year Warranty



C7L1520DL (M)

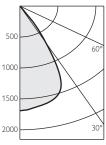
Calculite LED 7" Downlight Medium Beam

Page 2 of 3

Correlated Color Temperature (CCT) Multipliers 2700K (x 0.92), 3000K (x 1.00), 3500K (x 1.07), 4000K (x 1.14) **Reflector Finish Multipliers**

CL (x 1.00), CCL (x 0.94), CCD (x 0.93), CCZ (x 0.76), WH (x 0.82) — CL & CCD finishes are tested. CCL, CCZ & WH are calculated.

1500 LM, 3000K, CL FINISH TRIM



Trim: C7L1520DL30KMCLW Frame: C7L15N1 Output lumens: 1445 lm CCT': 3000K

Input Watts²: 26.6W Efficacy: 54.3 lm/w **CRI⁴:** 78

Spacing Criterion: 0.9

Certified Test Report No: F100223

Angle	MeanCP	Lumens
0	1692	
5	1664	158
10	1634	
15	1594	449
20	1518	
25	1300	562
30	768	
35	351	238
40	147	
45	35	37
50	3	
55	1	1
60	1	
65	0	0
70	0	
75	0	0
80	0	
85	0	0
90	0	

Angle MeanCP Lumens 2338

218

776

330

2298

205

Single Unit Data						
Height to	Initial	Beam				
Lighted Plan	e Footcandles	Diameter				
5'	68	6'				
6'	47	7'				
7'	35	8'				
8'	26	9'				
9'	21	10'				
Multiple	Unit Data -	RCR 2				
	Initial					
On Ctr.	Footcandles	Sq. Ft.				
5'	66.5	1.18				
6'	43.7	0.77				
7'	31.2	0.55				
8'	26.0	0.46				
9'	20.8	0.37				

38'x38'x10' Room, Workplane 21/2' above floor, 80/50/20% Reflectances

Zonal Lumens	&	Percentages
--------------	---	-------------

Z	one	Lumer	ns 9	6Luminair	6
0-	-30	1169		80.9%	
0-	-40	1406	,	97.3%	
0-	-60	1445		100.0%	
0-	-90	1445		100.0%	

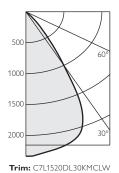
Ceiling		80)%		70)%	50)%	30)%	0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zoi	nal Cav	ity Me	thod -	Effect	ive Flo	or Ca	vity Re	flectar	rce = 2	20%
0	119	119	119	119	116	116	111	111	106	106	100
1	114	111	109	107	109	105	105	102	101	99	94
2	109	104	100	97	102	96	99	94	96	92	88
3	104	98	93	89	96	88	94	87	91	86	83
4	99	92	87	83	91	82	88	81	86	80	78
5	94	86	81	77	85	76	84	76	82	75	73
6	90	81	76	72	81	71	79	71	78	71	69
7	86	77	71	67	76	67	75	67	74	66	65
8	82	73	67	63	72	63	71	63	70	63	61
9	78	69	63	60	68	59	67	59	67	59	58
10	75	65	60	56	65	56	64	56	63	56	54

- 1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid-State Lighting Products.
- 2. Wattage controlled to within 5%.
- 3. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
- 4. Color Rendering Index within +/- 2%.

2000 LM, 3000K, CL FINISH TRIM

5 10

15



Frame: C7L20N1 Output lumens: 1998 lm CCT1: 3000K

Input Watts²: 39.5W Efficacy: 50.6 lm/w CRI4: 78

Spacing Criterion: 0.9

Certified Test Report No: F10023³

	Sing	le l	Unit	Dat	a
	Height to		Initia	1	
ı	ighted Plane	East	atcan	dlac	ı

Beam

6	60	/
7'	48	8'
8'	37	9'
9'	29	10'
Multiple	Unit Data -	RCR 2
Spacing	Initial	Watts/
	Initial Footcandles	
On Ctr.	Footcandles	Sq. Ft.
On Ctr. 5'	Footcandles 92.0	Sq. Ft. 1.75
On Ctr. 5' 6'	Footcandles 92.0 60.4	Sq. Ft. 1.75 1.15

28.8 38'x38'x10' Room, Workplane 21/2' above floor, 80/50/20% Reflectances

Zonal Lumens & Percentages

Zone	Lumens	%Luminaire
0-30	1613	80.7%
0-40	1944	97.3%
0-60	1998	100.0%
0-90	1998	100.0%

Ceiling		80)%		70)%	50)%	30)%	0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zoi	nal Cav	ity Me	ethod -	Effect	ive Flo	or Ca	vity Re	flectar	nce = 2	20%
0	119	119	119	119	116	116	111	111	106	106	100
1	114	111	109	107	109	105	105	102	101	99	94
2	109	104	100	97	102	96	99	94	96	92	88
3	104	98	93	89	96	88	94	87	91	86	83
4	99	92	86	83	91	82	88	81	86	80	78
5	94	86	81	77	85	76	84	76	82	75	73
6	90	81	76	72	81	71	79	71	78	70	69
7	86	77	71	67	76	67	75	67	74	66	65
8	82	73	67	63	72	63	71	63	70	63	61
9	78	69	63	60	68	60	67	59	67	59	58
10	75	65	60	56	65	56	64	56	63	56	54

- 1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008:
- Specifications for the Chromaticity of Solid-State Lighting Products.
- 2. Wattage controlled to within 5%.
- 3. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the
- Electrical and Photometric Measurements of Solid-State Lighting Products.
- 4. Color Rendering Index within +/- 2%.



C7L1520DL (M)

Calculite LED 7" Downlight Medium Beam

Page 3 of 3

Correlated Color Temperature (CCT) Multipliers 2700K (x 0.92), 3000K (x 1.00), 3500K (x 1.07), 4000K (x 1.14) **Reflector Finish Multipliers**

Angle MeanCP

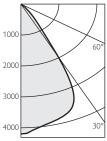
10

4072

3937 3699

CL (x 1.00), CCL (x 0.94), CCD (x 0.93), CCZ (x 0.76), WH (x 0.82) — CL & CCD finishes are tested. CCL, CCZ & WH are calculated.

3500 LM, 3000K, CL FINISH TRIM



000	25	3299	1408
	30	1900	
	35	828	561
	40	337	
000	45	68	79
	50	7	
	55	4	4
000 30°	60	2	
	65	1	1
	70	1	
Trim: C7L1520DL30KMCLW	75	0	0
rame: C7L35N1	80	0	
Output lumens: 3524 lm	85	0	0
CCT1: 3000K	90	0	

Input Watts²: 64.1 Efficacy: 55.0 lm/w CRI4: 79

Spacing Criterion: 0.8

Certified Test Report No: F12023³

Lumens
390
1080
1408
561
79
4
1
0
0

i leight to	HILLIAI	Dealli
Lighted Plane	Footcandles	Diameter
5'	168	4'
6'	117	5'
7'	86	6'
8'	66	6'
9'	52	7'
Multiple	Unit Data -	RCR 2
Spacing	Initial	Watts/
On Ctr.	Footcandles	Sq. Ft.
5'	163	2.84
6'	107	1.86
7'	76	1.33
8'	64	1.11
9'	51	0.89
38'x38'x10'	Room, Work	olane 2½'
above floor, 8		

Single Unit Data

Zonal Lumens & Percentages									
Zone	Lumens	%Luminair							
0-30	2879	81.7%							
0-40	3439	97.6%							
0.40	2522	100.09/							

3524

100.0%

0-90

Ceiling	80%			70%		50%		30%		0%		
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zoi	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100	
1	114	111	109	107	109	105	105	102	101	99	94	
2	109	104	100	97	102	96	99	94	96	92	88	
3	104	98	93	89	96	89	94	87	91	86	83	
4	99	92	87	83	91	82	88	81	87	80	78	
5	94	86	81	77	85	76	84	76	82	75	73	
6	90	81	76	72	81	72	79	71	78	71	69	
7	86	77	71	67	76	67	75	67	74	66	65	
8	82	73	67	63	72	63	71	63	70	63	61	
9	78	69	63	60	68	59	68	59	67	59	58	
10	75	65	60	56	65	56	64	56	63	56	54	

- 1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
- 2. Wattage controlled to within 5%.
- 3. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
- 4. Color Rendering Index within +/- 2%.



Philips Lightolier

e: lol.webmaster@philips.com

t: (508) 679-8131

w: www.lightolier.com

C7L1520DL(M) May 24, 2012

Specifications are subject to change without notice.

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