Champaign County
Department of
PLANNING &
ZONING

Brookens Administrative Center
1776 E. Washington Street
Urbana, Illinois 61802

(217) 384-3708
zoningdept@co.champaign.il.us
www.co.champaign.il.us/zoning

CASE NO. 836-S-16

PRELIMINARY MEMORANDUM
June 24, 2016

Petitioner: Michael Kobel, President, Champaign County Fair Association

Request: Authorize a Special Use Permit in the CR Conservation Recreation Zoning District for the following:

Part A: Authorize the expansion of a Fairgrounds that was previously authorized as a Special Use Permit in Case 962-S-94; and

Part B: Authorize the use of an existing Parking Lot as an additional principal use and the use of existing parking related passenger waiting buildings as additional principal structures on a Fairgrounds; and

Part C: Authorize the construction and use of a proposed Parking Lot as an additional principal use and a proposed related passenger waiting building as an additional principal structure on a Fairgrounds.

Location: A tract of land in the Northwest Quarter of Section 8, Township 19 North, Range 9 East of the Third Principal Meridian in Urbana Township and commonly known as the Champaign County Fairgrounds with an address of 1302 North Coler Avenue, Urbana.

Site Area: 53.79 acres

Time Schedule for Development: As soon as possible

Prepared by: **Susan Chavarria**
Senior Planner

John Hall
Zoning Administrator

BACKGROUND

The Champaign County Fair Association has operated at the Fairgrounds for over 100 years. They would like to expand their paved parking area to provide more spaces for the Carle Hospital complex and other potential users in the area. Carle runs two shuttle routes through the Fairgrounds parking lot, making stops at 4 existing passenger pick up stations. These routes have been in service for many years, providing transportation to the Carle campus for employees, visitors, and patients.

The petitioner proposes to add 201 parking spaces and a new passenger pick up station. A new Special Use Permit is required for such a significant change to the existing uses approved under Special Use Permit 962-S-94 on March 2, 1995.

County Recreation and Entertainment License Applications for 2015 and 2016 indicate the nature of events generally held at the Fairgrounds. These events are listed under Item 5.E. on page 9 of the Summary of Evidence.

The Fair Association has the following plans for additional development on the Fairgrounds: the proposed parking lot, a related stormwater detention basin, a Fair-use only storage shed that is considered an insignificant change to the existing use, and a BMX race track. On June 17, 2016, staff became aware of a BMX track to be constructed on the east side of the Fairgrounds. The Department is waiting for additional information before determining if the track will become a part of the proposed Special Use Permit, or if it will require its own hearing process.

EXTRATERRITORIAL JURISDICTION

The subject property is located within the one and one-half mile extraterritorial jurisdiction of the City of Urbana, a municipality with zoning. Municipalities with Planning Commissions are notified of Special Use Permit cases, but do not have protest rights in these cases.

The subject property is located within Urbana Township, which does not have a Planning Commission.

EXISTING LAND USE AND ZONING

Table 1. Land Use and Zoning in the Vicinity

Direction	Land Use	Zoning
Onsite	Fairgrounds and Parking Lot (Case 962-S-94)	CR Conservation Recreation
North	Busey Woods (Urbana Park District)	(City of Urbana) CR Conservation-Recreation- Education
East	Crystal Lake Park (Urbana Park District)	(City of Urbana) CR Conservation-Recreation- Education
West	Residential	R-2 Single Family Residential
South	Residential and Urbana Park District	(City of Urbana) R-2 Single Family Residential and CR Conservation-Recreation- Education

TEXT AMENDMENT 819-AT-15

Text Amendment 819-AT-15 was adopted on March 17, 2016 and amended the Zoning Ordinance with the following:

- Section 6.1.3 now includes a standard condition for the Fairground Special Use: “Site design, land management, and storm water management designs and practices shall provide effective site drainage; shall meet or exceed state and federal water quality standards; shall protect downstream drainage patterns; shall provide for stream flows that support healthy aquatic ecosystems; shall minimize impacts on adjacent properties and cause no more than minimal disturbance to the stream corridor environment; and, shall wherever possible, preserve existing habitat, enhance degraded habitat, and restore habitat.

- Section 6.1.3 added a new Special Use category: “Parking lot and related passenger waiting buildings as an additional principal use or additional principal structure.

- Subparagraph 4.2.1 C.4. now states, "PARKlNG LOT and related passenger waiting buildings may be authorized in the CR District only as an additional principal USE or additional principal STRUCTURE on Public Fairgrounds by SPECIAL USE Permit subject to Section 5.2."

- Section 5.2. now has "PARKING GARAGE or LOT" as a Principal Use, with a footnote that states: "PARKING LOT and related passenger waiting buildings may be authorized in the CR District only as an additional principal USE or additional principal STRUCTURE on Public Fairgrounds by SPECIAL USE Permit subject to the standard conditions in Section 6.1.3. provided that the Public Fairgrounds were an established use at the subject location on October 10, 1973, and provided that a Public Fair must continue to be held at the Public Fairgrounds or the Special Use Permit shall become void and subject to the standard conditions in Section 6.1.3."

STORMWATER MANAGEMENT

The subject property must comply with the *Champaign County Stormwater Management and Erosion Control Ordinance*. It should be noted that storm water detention is not automatically required for the existing parking pavement because those expansions predated Special Use 962-S-94.

Attachment G is the Stormwater Management Plan created by Berns, Clancy and Associates received May 26, 2016. The City of Urbana engineering staff has agreed to review the storm water management plan for the County and that review is underway. The review will be based on the City of Urbana requirements and will be consistent with the requirements of paragraph 4.2B. of the *Champaign County Storm Water Management and Erosion Control Ordinance*.

PROPOSED SPECIAL CONDITIONS

A. **All required certifications for the new stormwater drainage basin shall be submitted after construction prior to issuance of the Zoning Compliance Certificate.**

The special condition stated above is required to ensure the following:

That the drainage improvements conform to the requirements of the Storm water Management and Erosion Control Ordinance.

B. **Carle Hospital shuttle routes and scheduling shall comply with the Carle shuttle schedule and routes received May 31, 2016.**

The special condition stated above is required to ensure the following:

Public safety and minimizing traffic congestion and the impact on the neighborhood.

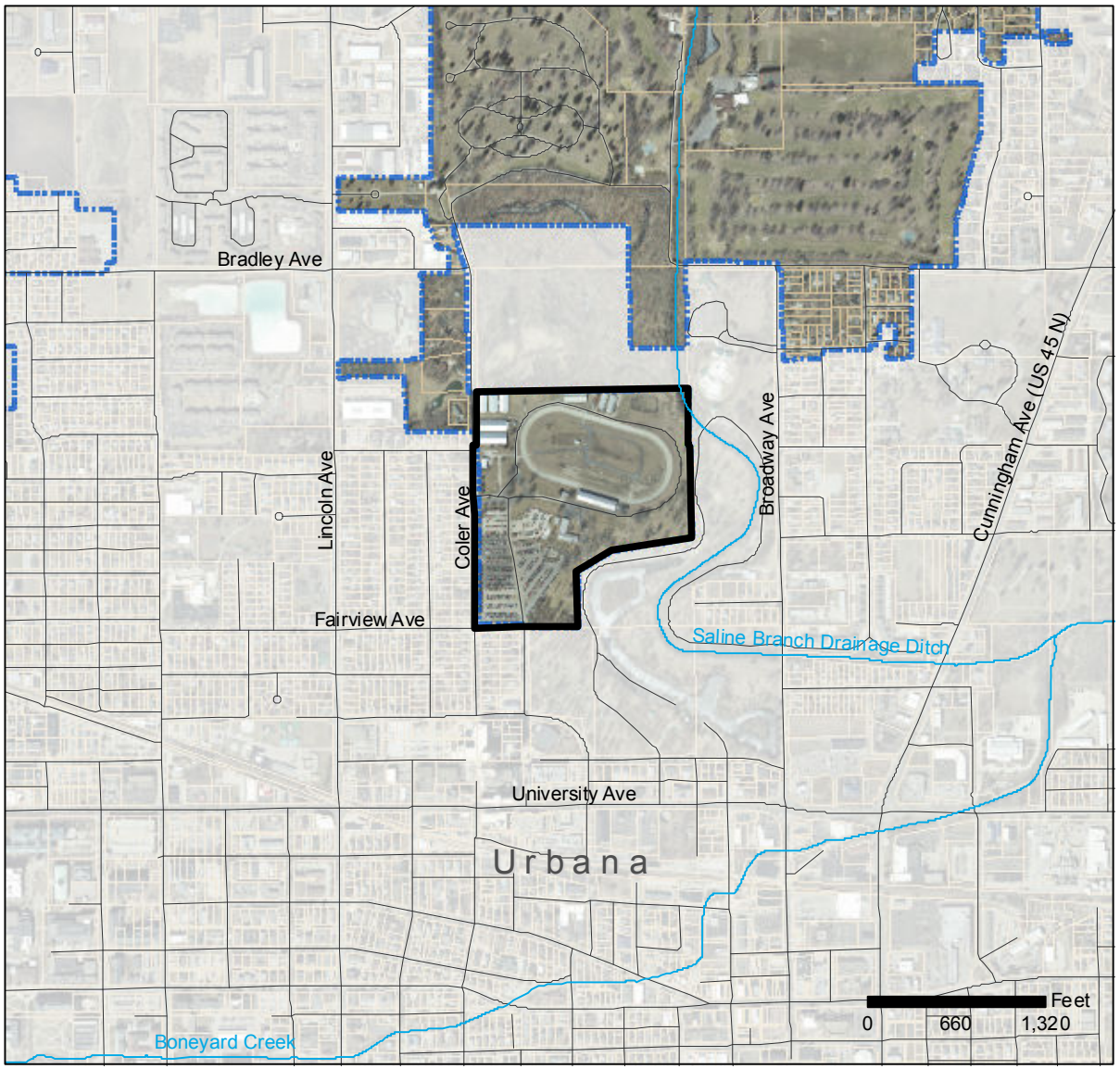
ATTACHMENTS

A	Case Maps (Location, Land Use, Zoning)
B	Annotated aerial photo by Berns, Clancy and Assoc. received May 9, 2016
C	Carle Foundation Hospital / Champaign County Fairgrounds Parking Lot Improvements Site Plans (27 sheets) by Berns, Clancy and Assoc. received May 9, 2016
D	Site Plan Sheet 5 of 24 for the proposed parking area created by Berns, Clancy and Assoc. received April 20, 2016
E	Site Plan from Zoning Use Permit Application #111-94-01 approved May 5, 1994
F	Site Plan (staff prepared) from Case 962-S-94
G	Finding of Fact and Final Determination for Case 962-S-94 dated March 16, 1995
H	Parking Expansions map created by staff on June 10, 2016
I	Ordinance #977 for Text Amendment Case 819-AT-16 dated March 17, 2016, with attachment: Amended Zoning Ordinance excerpt
J	Stormwater Management Plan by Berns, Clancy and Assoc. received May 26, 2016
K	Manufacturer's Specifications for outdoor lighting received May 25, 2016
L	Carle shuttle schedule and routes received May 31, 2016
M	Letter of Support from Urbana Park District received January 13, 2016
N	Site Images taken May 20, 2016 and June 15, 2016
O	Draft Summary of Evidence, Finding of Fact, and Final Determination

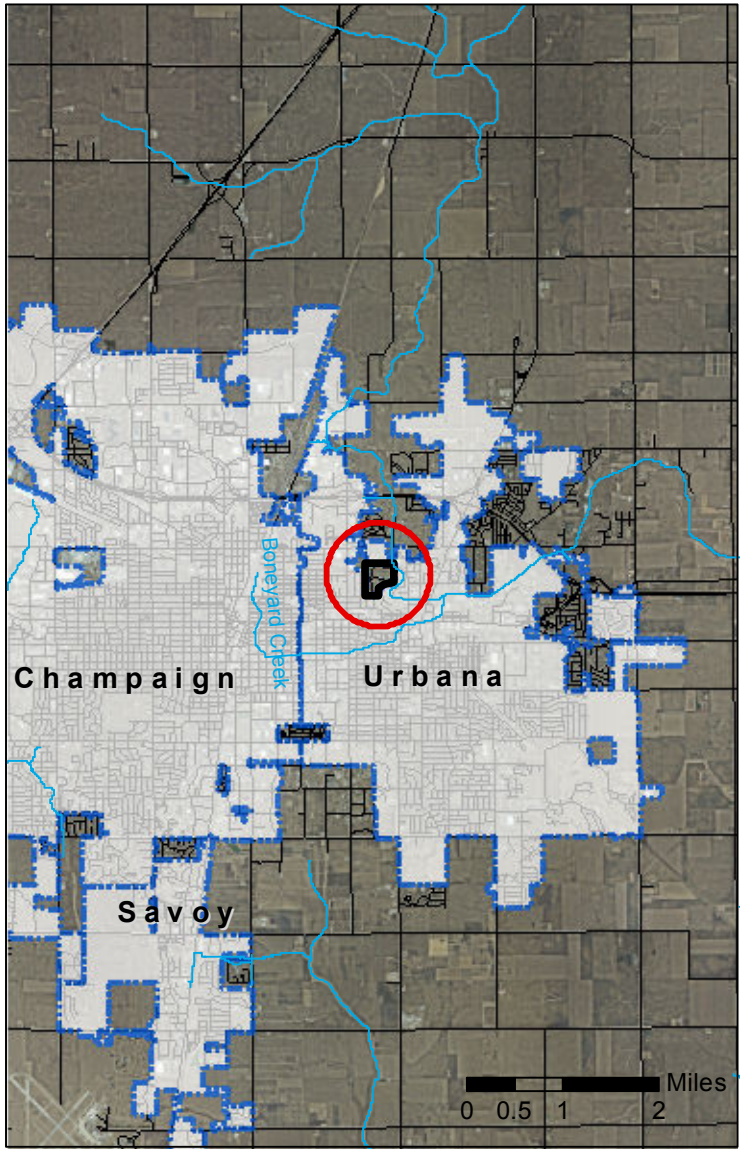
Location Map

Case 836-S-16
June 30, 2016

Subject Property



Property location in Champaign County



Legend

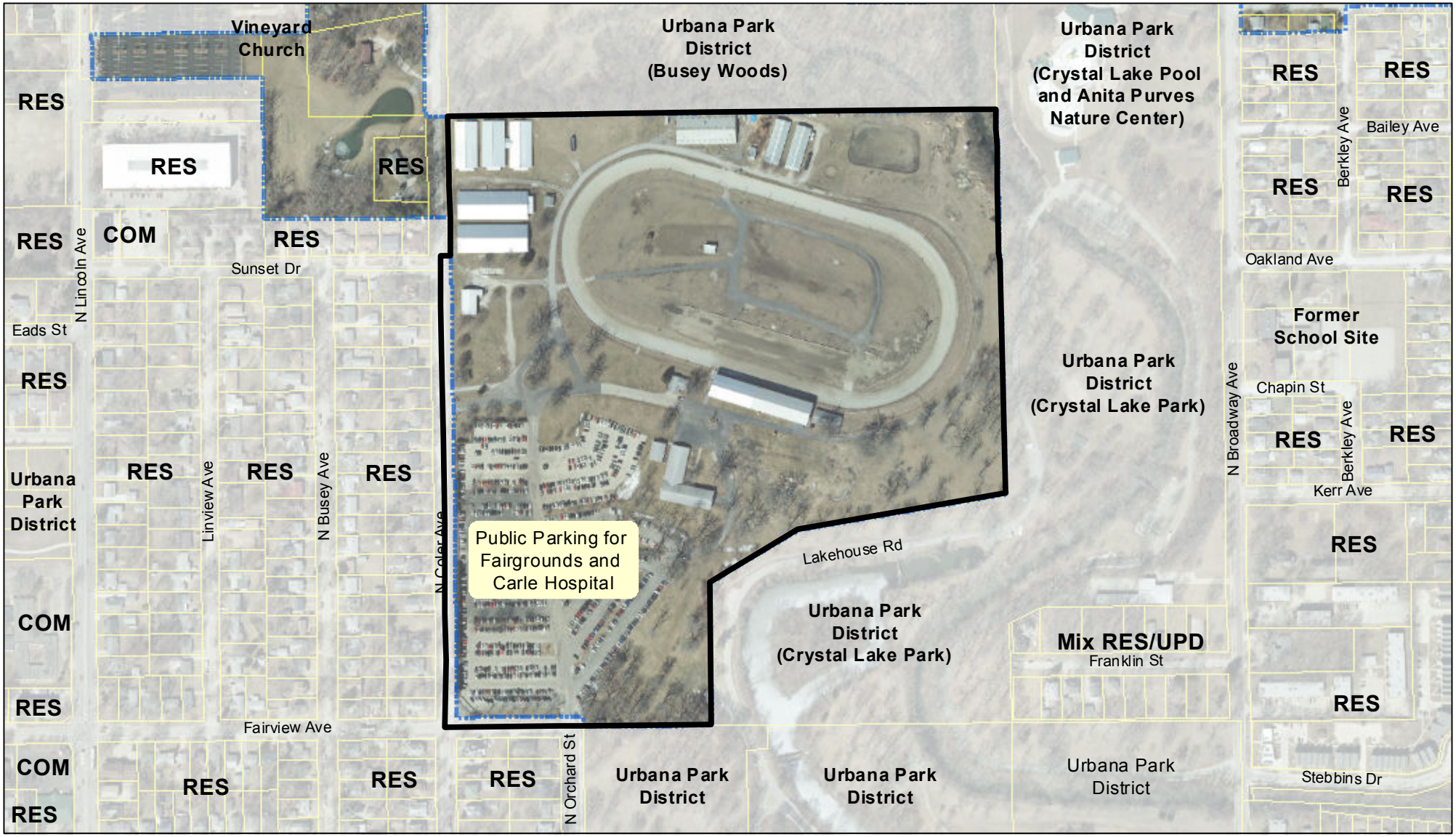
- Parcels
- Fairgrounds
- Municipal Boundary
- Streets
- Streams

N

Champaign County Department of PLANNING & ZONING

Land Use Map

Cases 836-S-16
June 30, 2016



Legend

Parcels
Subject Property

RES Residential
COM Commercial

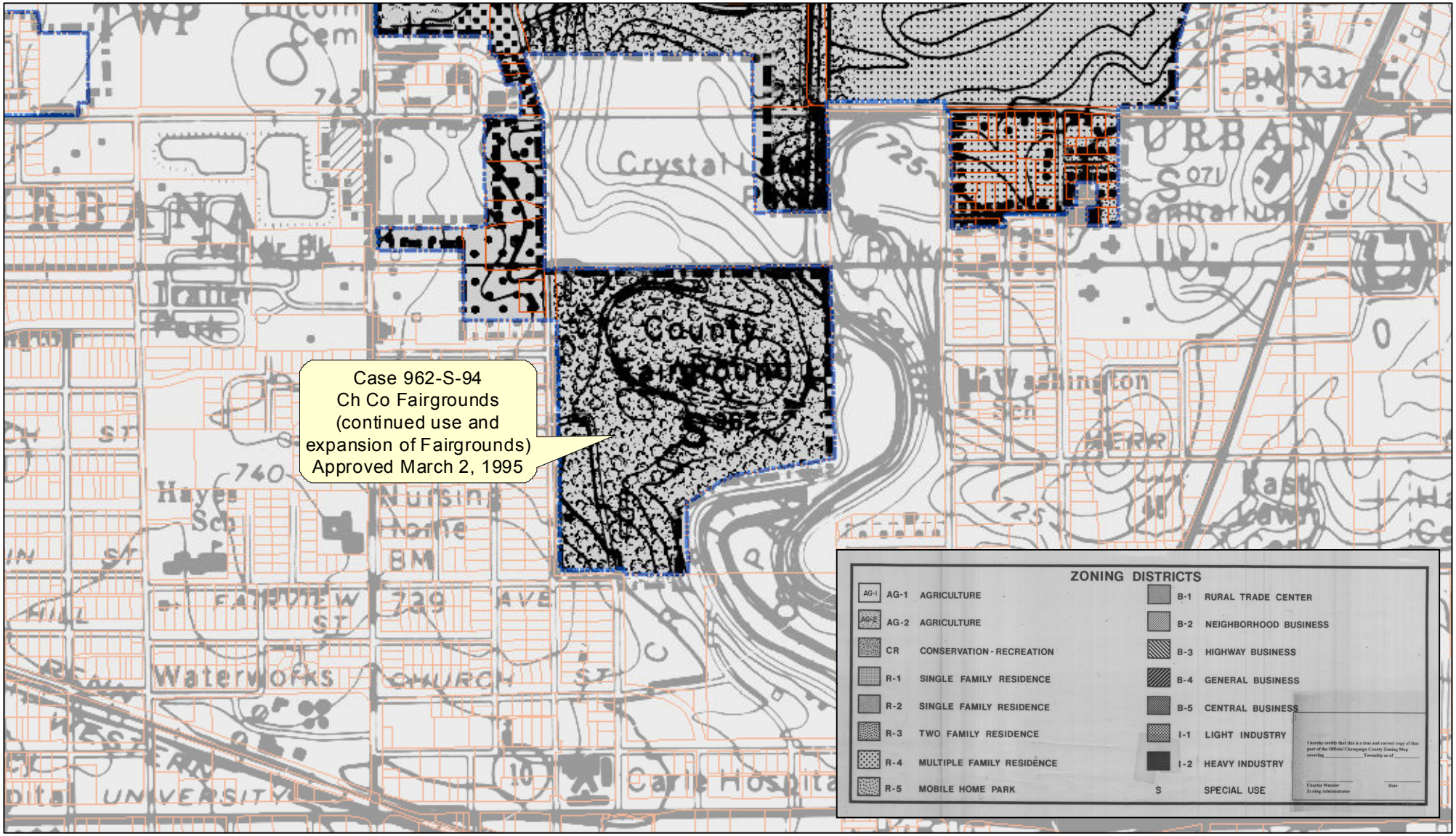
0 100 200 400 Feet

N

Champaign County Department of PLANNING & ZONING

Zoning Map

Case 836-S-16
June 30, 2016



Legend

- Subject Property
- Parcels
- Urbana Corporate Limit

0 200 400 800 Feet

N

Champaign County Department of PLANNING & ZONING

BERNS, CLANCY AND ASSOCIATES, P.C.
ENGINEERS • SURVEYORS • PLANNERS
☒ URBANA, IL 61803-0755 • TEL 217/384-1144 • FAX 217/384-3355
☐ DANVILLE, IL 61832-5729 • TEL 217/431-1144 • FAX 217/431-2929

Job # 2612-56
Computer CJS
Date 5-6-16

Project: Fairgrounds Parking Lot

Sheet 1 of 1

John Hall, Zoning Administrator
Ch. Co. Department of Planning and Zoning
Brookins Administrative Center
1776 E. Washington Street
Urbana, IL 61802

RECEIVED
MAY 09 2016
CHAMPAIGN CO. P & Z DEPARTMENT

Dear John,

As a follow up to your email communications to Mike Kobel of April 27, we provide the following items:

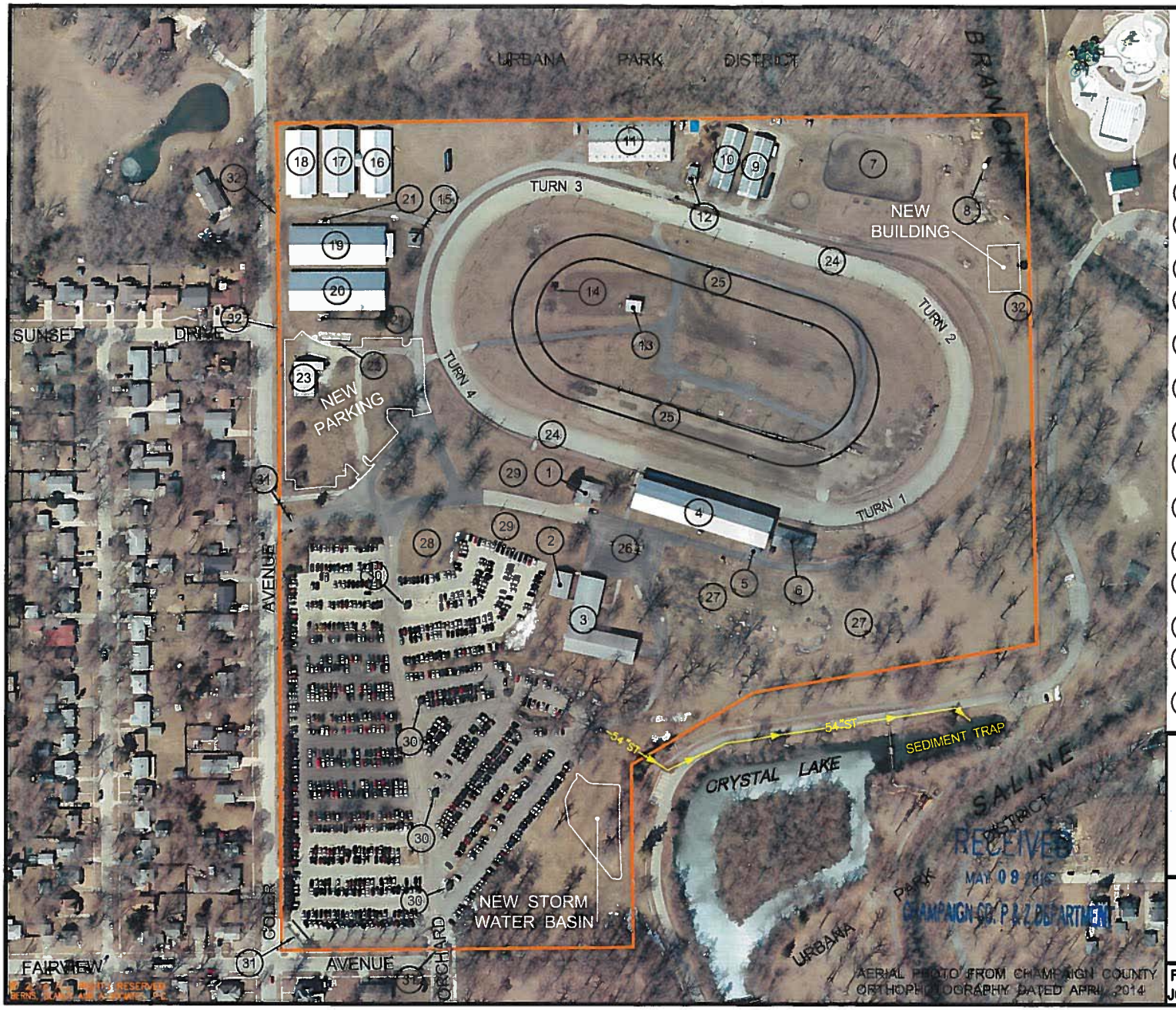
1) Two (2) copies of an updated color aerial photo Site Plan that labels facilities at the County Fairgrounds site. We also emailed a PDF of this exhibit so that you might have this in an electronic format as well.

2) The dimensional site plans you were previously provided have been updated to reflect a change to Portland Cement Concrete for the parking pavement. Several sheets were updated and two detail sheets were added to the plans. We provide one (1) full size set of the entire plans and one (1) half-size set as well for your review. We also emailed a PDF of these plans so that you might have this in an electronic format as well.

We are working with Carle and the Fairgrounds staff to assemble the other materials you have cited in your April 27 email and will provide them as soon as assembled. Please let us know if you have any questions regarding the transmitted materials.

cc: Mike Millage
Mike Kobel

Chris Billing



NORTH

200 100 0 200

SCALE IN FEET

AREA OF INTEREST

1. FAIR OFFICE
2. MAIN RESTROOMS
3. KESLER EXHIBIT HALL
4. GRANDSTANDS
5. FISH TENT (VENDORS)
6. PAVILION (BEER TENT)
7. CORRAL/PADDOCK AREA
8. STEEL WATER TANK
9. HORSE BARN (BOARDING)
10. HORSE BARN (BOARDING)
11. HORSE BARN
12. SPEED OFFICE (FAIR ONLY)
13. PORTABLE STAGE
14. ANNOUNCER'S STAND (PORATBLE)
15. 4-H RESTROOMS
16. SHEEP BARN
17. HOG BARN
18. HOG BARN
19. BEEF BARN
20. DAIRY BARN
21. MANURE PITS
22. CATTLE WASH RACKS
23. MAINTENANCE FACILITY & OFFICE
24. ½-MILE DIRT TRACK
25. ¼-MILE DIRT TRACK
26. ELECTRIC COURTYARD
27. MIDWAY (CARNIVAL)
28. "KIDDY-LAND" AREA
29. FOOD VENDORS
30. CARLE SHUTTLE STOPS
31. MAIN FAIR ENTRANCE
32. SECONDARY ACCESS GATES

SITE PLAN

CHAMPAIGN COUNTY FAIRGROUNDS
SECTION 8, T19N, R9E, 3PM
URBANA TOWNSHIP
CHAMPAIGN COUNTY, ILLINOIS

BERNS, CLANCY AND ASSOCIATES
ENGINEERS • SURVEYORS • PLANNERS
405 EAST MAIN STREET - POST OFFICE BOX 755
URBANA, ILLINOIS 61803-0755
PHONE: (217) 384-1144 - FAX: (217) 384-3355

FILE: 2612-56EX.DWG	DATE:	SHEET 1 OF 1
JOB: 2612-56	050516	

CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS PARKING LOT IMPROVEMENT SITE URBANA TOWNSHIP, CHAMPAIGN COUNTY, ILLINOIS

INDEX TO SHEETS

SPECIFICATIONS

GENERAL SPECIFICATIONS FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS", SEVENTH EDITION, DATED 2014 AS PUBLISHED BY THE ILLINOIS SOCIETY OF PROFESSIONAL ENGINEERS, UNLESS OTHERWISE NOTED ON THE PLANS.

AND

GENERAL SPECIFICATIONS FOR WORK OTHER THAN SANITARY SEWERS AND WATER MAINS SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AS ADOPTED BY THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION, DATED JANUARY 1, 2016 AND "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" AS ADOPTED BY THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION, DATED JANUARY 1, 2016 UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE PROJECT DOCUMENTS.

STATEMENT OF COMPLIANCE

I HAVE PREPARED, OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH THE ENVIRONMENTAL BARRIERS ACT (ILL. REV. STAT. 1985, CH. 111 1/2, PARS. 3711 ET. SEQ. AS AMENDED), AND THE ILLINOIS ACCESSIBILITY CODE, 71 ILL. ADM. CODE 400.

CHRISTOPHER BILLING 040282 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

SIGNED: Christopher Billing
ARCHITECT/ENGINEER
ILLINOIS REGISTRATION NO.: 040282
DATE: May 6, 2016

LOCATION MAP

CHAMPAIGN COUNTY ORTHOPHOTOGRAPHY DATED APRIL 2011

NORTH

SIGNED AND SEALED MAY 6, 2016
Christopher Billing
CHRISTOPHER BILLING, P.E., VICE PRESIDENT
BERNS, CLANCY AND ASSOCIATES, P.C.
ILLINOIS PROFESSIONAL ENGINEER 40282
LICENSE EXPIRATION: NOVEMBER 30, 2017
URBANA, CHAMPAIGN COUNTY, ILLINOIS
ILLINOIS PROFESSIONAL DESIGN FIRM 2999
LICENSE EXPIRATION: APRIL 30, 2017

CHRISTOPHER BILLING 040282 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

JULIE NOTE: THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES. FOR UTILITY LOCATIONS CALL JULIE (800) 892-0123

DESIGNED:	CB/RM	REVISIONS
DRAFTED:	PE	
CHECKED:	CB/ELC/TBB	
FILE:	2612-51P1	

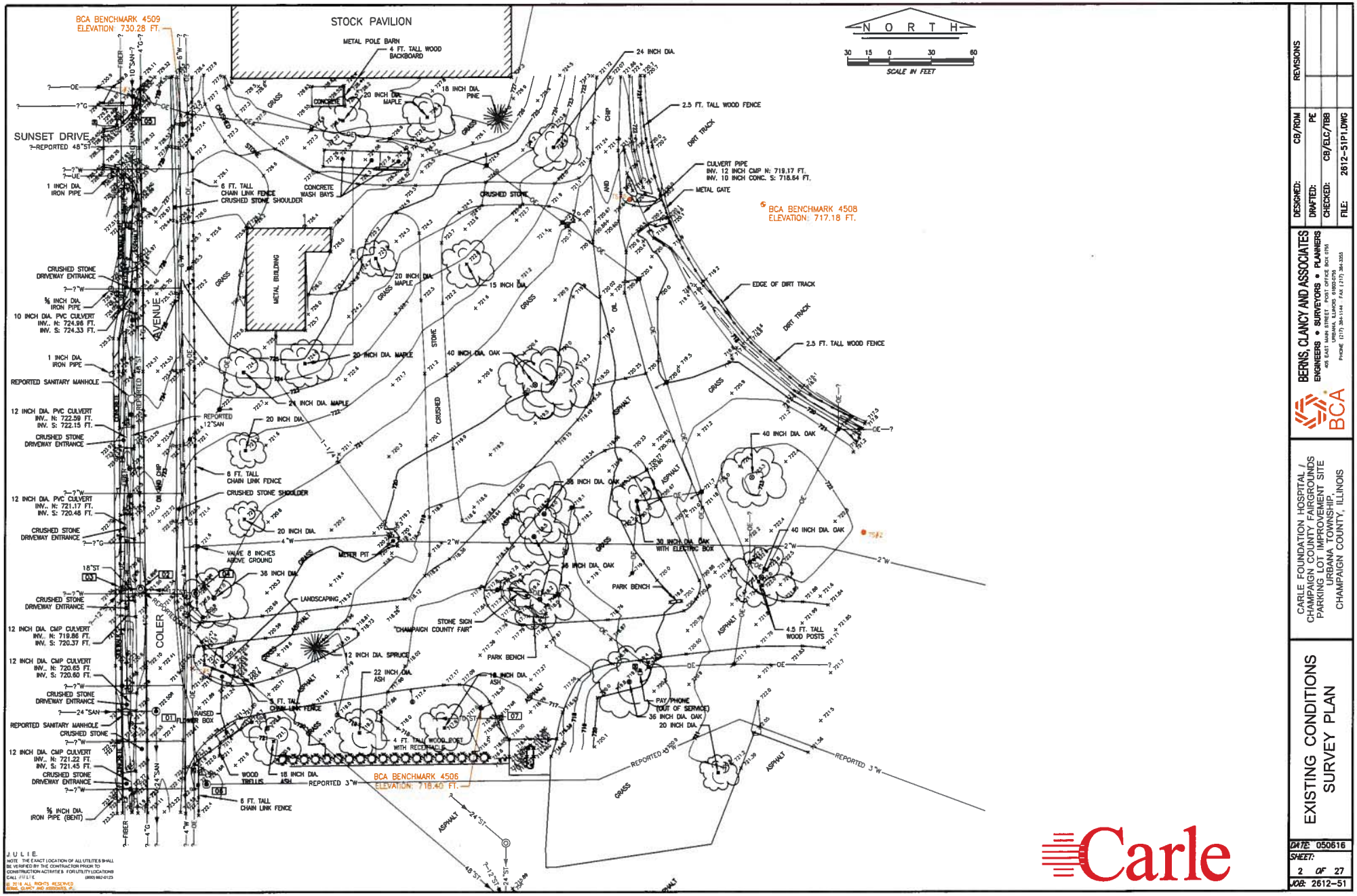
BCA BERNS, CLANCY AND ASSOCIATES
ENGINEERS • SURVEYORS • PLANNERS
405 EAST MAIN STREET - POST OFFICE BOX 0756
URBANA, ILLINOIS 61803-0756
PHONE: (217) 384-1144 - FAX: (217) 384-3355

Carle

CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS PARKING LOT IMPROVEMENT SITE URBANA TOWNSHIP, CHAMPAIGN COUNTY, ILLINOIS

COVER SHEET

DATE: 050616
SHEET: 1 OF 27
JOB: 2612-51



Carle

DESIGNED: CB/ROM
DRAFTED: PE
CHECKED: CB/ELC/TBB
FILE: 2612-51P1.DWG

REVISIONS

BERNS, CLANCY AND ASSOCIATES
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405 EAST MAIN STREET POST OFFICE BOX 755
URBANA, ILLINOIS 61802-0755
PHONE (217) 384-1144 FAX (217) 384-3355

CARLE FOUNDATION HOSPITAL /
CHAMPAIGN COUNTY FAIRGROUNDS
PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP,
CHAMPAIGN COUNTY, ILLINOIS

EXISTING CONDITIONS SURVEY PLAN

DATE: 050616
SHEET: 2 OF 27
JOB: 2612-51

BENCHMARKS (N. G. V. D. 1929)

BCA BENCHMARK 1110
ELEVATION: 704.94 FT.
(OFF-SITE)
CHISELED SQUARE FOUND ON TOP OF THE SOUTHEASTERY CONCRETE WINGWALL OF SALINE BRANCH BRIDGE NEAR SOUTH END OF CRYSTAL LAKE POOL SITE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

BCA BENCHMARK 2659
ELEVATION: 719.86 FT.
(OFF-SITE)
CHISELED SQUARE FOUND ON TOP OF THE SOUTHWEST CORNER OF A CONCRETE BUS SHELTER #2 PAD 345 FEET NORTH OF THE CENTERLINE OF FAIRVIEW DRIVE AND 20 FEET WEST OF THE CENTERLINE OF ORCHARD STREET, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

BCA BENCHMARK 3026
ELEVATION: 734.31 FT.
(OFF-SITE)
RAILROAD SPIKE FOUND 0.5 FEET ABOVE GROUND IN THE NORTHWESTERLY FACE OF A UTILITY POLE 44 FEET NORTH OF THE CENTERLINE OF SUNSET DRIVE AND 96 FEET EAST OF THE CENTERLINE EXTENDED OF BUSEY AVENUE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

BCA BENCHMARK 4506
ELEVATION: 718.40 FT.
CHISELED SQUARE SET 1.4 FEET ABOVE GROUND ON TOP OF THE NORTHEASTERLY EDGE OF A CONCRETE LIGHT POLE BASE 230 FEET EAST OF THE CENTERLINE OF COLER AVENUE AND 400 FEET SOUTH OF THE CENTERLINE EXTENDED OF SUNSET DRIVE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

BCA BENCHMARK 4507
ELEVATION: 718.68 FT.
(OFF-SITE)
CHISELED SQUARE SET ON THE NORTHERLY EDGE OF A CONCRETE WATER MANHOLE TOP SOUTH OF THE CHAMPAIGN COUNTY FAIR OFFICE BUILDING, 675 FEET EAST OF THE CENTERLINE OF COLER AVENUE AND 415 FEET SOUTH OF THE CENTERLINE EXTENDED OF SUNSET DRIVE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

BCA BENCHMARK 4508
ELEVATION: 717.18 FT.
P.K. NAIL SET 1 FOOT ABOVE GROUND IN THE WESTERLY FACE OF A UTILITY POLE (INSIDE OF DIRT TRACK) 435 FEET EAST OF THE CENTERLINE OF COLER AVENUE AND 45 FEET SOUTH OF THE CENTERLINE EXTENDED OF SUNSET DRIVE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

BCA BENCHMARK 4509
ELEVATION: 730.28 FT.
STAMPED "X" SET 2.5 FEET ABOVE GROUND ON TOP OF CENTER FIRE HYDRANT CAP BOLT 19 FEET EAST OF THE CENTERLINE OF COLER AVENUE AND 16 FEET NORTH OF THE CENTERLINE EXTENDED OF SUNSET DRIVE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

BCA BENCHMARK 4510
ELEVATION: 725.50 FT.
(OFF-SITE)
P.K. NAIL SET 1 FOOT ABOVE GROUND IN THE SOUTHERLY FACE OF A UTILITY POLE WEST OF CHAMPAIGN COUNTY FAIRGROUNDS HORSE BARN, 610 FEET EAST OF THE CENTERLINE OF COLER AVENUE AND 370 FEET NORTH OF THE CENTERLINE EXTENDED OF SUNSET DRIVE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

BCA BENCHMARK 4511
ELEVATION: 716.31 FT.
(OFF-SITE)
P.K. NAIL SET 1 FOOT ABOVE GROUND IN THE SOUTHERLY FACE OF A UTILITY POLE EAST OF CHAMPAIGN COUNTY FAIRGROUNDS HORSE BARNS, 1,240 FEET EAST OF THE CENTERLINE OF COLER AVENUE AND 238 FEET NORTH OF THE CENTERLINE EXTENDED OF SUNSET DRIVE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

BCA BENCHMARK 4512
ELEVATION: 712.72 FT.
(OFF-SITE)
P.K. NAIL SET 1 FOOT ABOVE GROUND IN THE SOUTHERLY FACE OF A UTILITY POLE 1,520 FEET EAST OF THE CENTERLINE OF COLER AVENUE AND 180 FEET NORTH OF THE CENTERLINE EXTENDED OF SUNSET DRIVE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

TRAVERSE STATIONS (N. A. D. 83 (1986))

TS#1
CITY OF URBANA
CONTROL STATION 23
N: 1,259,126.86 FT.
E: 1,019,374.55 FT.
(OFF-SITE)
BRASS TABLET STAMPED "CITY OF URBANA HORIZONTAL CONTROL MONUMENT" FOUND IN CONCRETE 14 FEET WEST OF THE CENTERLINE OF BROADWAY AVENUE AND 110 FEET NORTH OF THE CENTERLINE OF OAKLAND AVENUE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

TS#2
N: 1,258,720.85 FT.
E: 1,017,623.27 FT.
IRON PIPE WITH CAP STAMPED "ILS 2006 2207" SET IN GROUND 500 FEET EAST OF THE CENTERLINE OF COLER AVENUE AND 273 FEET SOUTH OF THE CENTERLINE EXTENDED OF SUNSET DRIVE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

TS#3
N: 1,259,030.95 FT.
E: 1,017,102.25 FT.
IRON PIPE WITH CAP STAMPED "ILS 2006 2207" SET IN GROUND 16 FEET WEST OF THE CENTERLINE OF COLER AVENUE AND 36 FEET NORTH OF THE CENTERLINE OF SUNSET DRIVE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

TS#4
N: 1,259,080.16 FT.
E: 1,018,532.80 FT.
(OFF-SITE)
IRON PIPE WITH CAP STAMPED "ILS 2006 2207" SET IN GROUND NEAR THE NORTHEASTERLY PORTION OF THE CHAMPAIGN COUNTY FAIRGROUNDS DIRT TRACK 1,417 FEET EAST OF THE CENTERLINE OF COLER AVENUE AND 70 FEET NORTH OF THE CENTERLINE EXTENDED OF SUNSET DRIVE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

TS#5
N: 1,258,624.78 FT.
E: 1,017,145.68 FT.
"MAG" NAIL SET IN ASPHALT PAVEMENT 22 FEET EAST OF THE CENTERLINE OF COLER AVENUE AND 370 FEET SOUTH OF THE CENTERLINE EXTENDED OF SUNSET DRIVE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

TS#6
N: 1,258,957.08 FT.
E: 1,017,456.69 FT.
IRON PIPE WITH CAP STAMPED "ILS 2006 2207" SET IN GROUND 340 FEET EAST OF THE CENTERLINE OF COLER AVENUE AND 41 FEET SOUTH OF THE CENTERLINE EXTENDED OF SUNSET DRIVE, URBANA, CHAMPAIGN COUNTY, ILLINOIS.

CITY OF URBANA
CONTROL STATION 24
N: 1,260,361.42 FT.
E: 1,021,357.17 FT.
(OFF-SITE)
BRASS POST FROM REMAINS OF BRASS TABLET IN CONCRETE POST (TABLET BROKEN OFF) FOUND 22 FEET NORTH OF THE CENTERLINE OF COUNTRY CLUB ROAD AND 350 FEET WEST OF THE CENTERLINE OF CUNNINGHAM AVENUE (U. S. ROUTE 45), URBANA, CHAMPAIGN COUNTY, ILLINOIS.

UTILITIES NOTE

UTILITIES SHOWN ARE AS REPORTED TO US AND AS INDICATED ON EXISTING UTILITY BASE MAPS AND REFERENCE DATA PROVIDED TO US. NO ATTEMPT HAS BEEN MADE TO EXCAVATE, UNCOVER, EXPOSE OR ELECTRONICALLY LOCATE THESE FACILITIES TO FIELD CHECK THE EXISTENCE, SIZE, DEPTH, CONDITION, CAPACITY OR EXACT LOCATION OF THESE UTILITIES. FOR ADDITIONAL INFORMATION CONTACT:

SANITARY SEWERS,
STORM SEWERS
AND STREET LIGHTS:

CITY OF URBANA
PUBLIC WORKS DEPARTMENT
706 SOUTH GLOVER STREET
URBANA, IL 61802
PHONE: 217/384-2377
FAX: 217/384-2400

SANITARY INTERCEPTOR SEWERS:

URBANA & CHAMPAIGN
SANITARY DISTRICT
1100 EAST UNIVERSITY AVENUE
POST OFFICE BOX 669
URBANA, IL 61803-0669
PHONE: 217/367-3409
FAX: 217/367-2603

WATER:

ILLINOIS AMERICAN
WATER COMPANY
601 NORTH LINCOLN AVENUE
URBANA, IL 61801
PHONE: 217/352-7001
FAX: 217/352-7008

GAS:

AMEREN ILLINOIS
ATTN: STEVE ESTES
1112 WEST ANTHONY DRIVE
POST OFFICE 17070
URBANA, IL 61801-7070

ELECTRIC:

AMEREN ILLINOIS
ATTN: STEVE ESTES
1112 WEST ANTHONY DRIVE
POST OFFICE 17070
URBANA, IL 61801-7070

TELECOMMUNICATIONS:

AT&T (LONG DISTANCE)
ATTN: CARL DONAHUE
866 ROCK CREEK ROAD
PLANO, IL 60545
PHONE: 847/420-9115
FAX: 847/244-9597

AT&T (LOCAL)
201 SOUTH NEIL STREET
CHAMPAIGN, IL 61820
PHONE: 217/398-7980
FAX: 217/398-7991

U.S. SPRINT CORPORATION
ATTN: JAMES BURTON
5600 NORTH RIVER ROAD,
SUITE 300
ROSEMONT, IL 60018
PHONE: 847/737-1273
FAX: 847/737-1377

MCI TELECOMMUNICATIONS
2921 GREENBRIAR DRIVE
SUITE A
SPRINGFIELD, IL 62704
PHONE: 217/546-9410

McLEOD USA
ATTN: JEFF TAYLOR
30486 E 400 NORTH ROAD
STRAWN, IL 61775
PHONE: 309/838-0788

CONNXUS
330 WEST OTTAWA STREET
PAXTON, IL 60957
PHONE: 217/379-2026
FAX: 217/379-3361

MCI (WORLDCOM)
ATTN: INVESTIGATIONS
2400 N GLENVILLE DRIVE
RICHARDSON, TX 75082
PHONE: 972/729-6322
FAX: 972/729-6240

TELECOMMUNICATIONS:

ITV-3 (UC2B)
ATTN: SABRINA GOSNELL
713 EDGEBROOK DRIVE
CHAMPAIGN, IL 61820
PHONE: 217/366-8222

TRANSPORTATION:

ILLINOIS DEPARTMENT OF
TRANSPORTATION DISTRICT 5
ATTN: KEN HACKNEY
13473 ILL HIGHWAY 133
POST OFFICE BOX 610
PARIS, IL 61944-0610
PHONE: 217/465-4181
FAX: 217/465-5732

CABLE TELEVISION:

COMCAST
ATTN: KEITH KOSHINSKI
303 FAIRLAWN DRIVE
URBANA, ILLINOIS 61801
PHONE: 217/384-8031
FAX: 217/384-2021
DIRECT: 217/519-4527

TOWNSHIP SUPERVISOR:

URBANA TOWNSHIP
ATTN: JAMES PRATHER
2312 EAST PERKINS ROAD
URBANA, ILLINOIS 61802
PHONE: 217/344-7361

ONE-CALL SYSTEM:

J.U.L.I.E.
PHONE: 800/892-0123

LEGEND

- 30 INCH LONG, 1/2 INCH DIAMETER IRON PIPE SURVEY MONUMENT SET WITH ALUMINUM CAP STAMPED "ILS 2006 2207"
- EXISTING IRON PIPE/PIN SURVEY MONUMENT FOUND
- "MAG" NAIL SURVEY MONUMENT SET
- EXISTING DITCH CENTERLINE
- EXISTING FENCE LINE
- EXISTING BUILDING LINE
- EXISTING SIGN
- EXISTING POLE/POST
- BENCHMARK/DESIGNATION
- EXISTING DECIDUOUS TREE/SIZE
- EXISTING EVERGREEN BUSH
- EXISTING EVERGREEN TREE/SIZE
- EXISTING PRIVATE MAILBOX
- EXISTING "SOFT" SPOT ELEVATION
- EXISTING "HARD" SPOT ELEVATION
- EXISTING "HARD" SPOT ELEVATION AT TOP OF CURB
- EXISTING "HARD" SPOT ELEVATION AT FLOWLINE OF GUTTER
- EXISTING "HARD" SPOT ELEVATION AT MANHOLE RIM
- EXISTING INDEX CONTOUR LINE
- EXISTING INTERMEDIATE CONTOUR LINE
- TRAVERSE STATION/DESIGNATION
- BERNS, CLANCY AND ASSOCIATES MANHOLE DESIGNATION
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING TELEPHONE PEDESTAL
- EXISTING ELECTRIC LIGHTING MANHOLE (HAND HOLE)
- EXISTING STORM SEWER MANHOLE (OPEN LID)
- EXISTING STORM SEWER MANHOLE (CLOSED LID)
- EXISTING STORM SEWER CURB INLET
- EXISTING SANITARY SEWER MANHOLE
- EXISTING UTILITY POLE/ DOWN GUY/TRANSFORMER
- EXISTING EXTENDED ARM POLE LIGHT
- EXISTING CULVERT
- EXISTING UNDERGROUND TELEPHONE LINE (APPROXIMATE LOCATION)
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE (APPROXIMATE LOCATION)
- EXISTING WATER LINE/SIZE (APPROXIMATE LOCATION)
- EXISTING GAS LINE/SIZE (APPROXIMATE LOCATION)
- EXISTING STORM SEWER LINE/SIZE (APPROXIMATE LOCATION)
- EXISTING SANITARY SEWER LINE/SIZE (APPROXIMATE LOCATION)
- EXISTING UNDERGROUND FIBER OPTIC COMMUNICATIONS LINE (APPROXIMATE LOCATION)
- EXISTING ELECTRIC METER
- EXISTING FROST-PROOF SPIGOT
- UNDERGROUND UTILITY LOCATE MARK (APPROXIMATE LOCATION)
- DESTINATION OR DATA UNKNOWN

GENERAL NOTES

ALL MEASUREMENTS ARE IN FEET AND DECIMAL PARTS THEREOF, UNLESS NOTED OTHERWISE.

SEE CHAMPAIGN COUNTY ORDINANCES AND REGULATIONS FOR ZONING, SETBACK AND BUILDING STANDARD REQUIREMENTS.

ALL ELEVATIONS SHOWN ARE BASED UPON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (MEAN SEA LEVEL DATUM) AS ESTABLISHED AND PUBLISHED BY THE UNITED STATES NATIONAL GEODETIC SURVEY.

COORDINATES SHOWN ARE BASED UPON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83 (1986) BASED ON CITY OF URBANA HORIZONTAL CONTROL STATIONS 23 AND 24.

THERE IS NO 100-YEAR FLOOD PLAIN AREA AT THIS SITE.

EXISTING MANHOLE / INLET DATA

SANITARY MANHOLE 01
RIM ELEVATION: 722.50 FT.
INV. 24 INCH D.I.P. W: 714.72 FT.
INV. 24 INCH D.I.P. S: 714.20 FT.

STORM MANHOLE 02
RIM ELEVATION: 721.69 FT.
INV. 18 INCH CONC. W: 717.64 FT.
INV. 12 INCH PVC E: 715.74 FT.
FLOOR ELEVATION: 707.59 FT.
VISIBLE FLOW FROM NORTH TO SOUTHEAST

STORM INLET STRUCTURE 03
RIM ELEVATION: 721.02 FT.
INV. 12 INCH CONC. SW: 717.37 FT.
INV. 18 INCH CONC. E: 717.32 FT.

STORM MANHOLE 04
RIM ELEVATION: 720.23 FT.
INV. 12 INCH CONC. W: 716.31 FT.

SANITARY MANHOLE 05
RIM ELEVATION: 728.77 FT.
INV. 10 INCH VCP N: 717.34 FT.
INV. 10 INCH VCP S: 717.31 FT.

WATER METER MANHOLE 06
RIM ELEVATION: 722.16 FT.
TOP OF METER PIPE E-W: 720.48 FT.
FLOOR ELEVATION: 717.83 FT.
2 FT. OF STANDING WATER

STORM INLET 07 (NO CURB)
FLOWLINE ELEVATION: 715.74 FT.
INV. 10 INCH HDPE W: 714.34 FT.

STORM MANHOLE 08
RIM ELEVATION: 715.75 FT.
INV. 6 INCH VCP S: 713.30 FT.
INV. 12 INCH CONC. NW: 710.07 FT.
INV. 18 INCH CONC. SW: 710.12 FT.
INV. 24 INCH CONC. N: 709.96 FT.
INV. 48 INCH CONC. NW: 703.53 FT.
INV. 54 INCH CONC. SE: 703.10 FT.

STORM MANHOLE 09
RIM ELEVATION: 713.48 FT.
INV. 3 INCH CPP NE: 706.39 FT.
(3 INCH CPP INSIDE 4 INCH VCP)
INV. 12 INCH CONC. S: 710.53 FT.
INV. 54 INCH CONC. NW: 701.80 FT.
INV. 54 INCH CONC. SE: 701.69 FT.

STORM MANHOLE 10
RIM ELEVATION: 706.35 FT.
INV. 18 INCH CONC. SW: 701.76 FT.
INV. 18 INCH CONC. NE: 701.73 FT.
INV. 24 INCH CONC. NW: 702.38 FT.

STORM MANHOLE 11
RIM ELEVATION: 704.51 FT.
INV. 15 INCH CONC. E: 702.00 FT.

STORM MANHOLE 12
RIM ELEVATION: 705.74 FT.
INV. 12 INCH CONC. E: 702.15 FT.
INV. 15 INCH CONC. N: 703.33 FT.
INV. 18 INCH CONC. SW: 700.73 FT.
INV. 54 INCH CONC. NW: 698.54 FT.
INV. 54 INCH CONC. SE: 698.64 FT.

STORM MANHOLE 13
RIM ELEVATION: 705.63 FT.
INV. 12 INCH CONC. W: 702.15 FT.

J.U.L.I.E.
NOTE: THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES FOR UTILITY LOCATIONS CALL J.U.L.I.E. (800) 892-0123

Carle

REVISIONS

DESIGNED: CB/RDM
DRAFTED: PE
CHECKED: CB/ELC/TBB
FILE: 2612-51P1.DWG

BERNS, CLANCY AND ASSOCIATES
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CARLE FOUNDATION HOSPITAL /
CHAMPAIGN COUNTY FAIRGROUNDS
PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP /
CHAMPAIGN COUNTY, ILLINOIS

EXISTING CONDITIONS SURVEY DATA

DATE: 050616
SHEET: 3 OF 27
JOB: 2612-51

GENERAL CONSTRUCTION NOTES

1. ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE REFERENCED STANDARD SPECIFICATIONS, THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS, AND THE NOTES AND DETAILS CONTAINED IN THESE PLANS.
2. SPECIFICATIONS ADOPTED BY REFERENCE IN THESE PLANS REFER TO THE LATEST PUBLISHED REVISION THEREOF.
3. ALL MEASUREMENTS ARE IN FEET AND DECIMAL PARTS THEREOF, UNLESS NOTED OTHERWISE.
4. ALL ELEVATIONS SHOWN ARE BASED UPON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (MEAN SEA LEVEL DATUM) AS ESTABLISHED AND PUBLISHED BY THE UNITED STATES NATIONAL GEODETIC SURVEY.
5. NO INDEPENDENT INVESTIGATION CONCERNING ZONING OR LAND USE, OR INDEPENDENT SEARCH OF RECORDS FOR EASEMENTS, ENCUMBRANCES, RESTRICTIVE COVENANTS, SUBDIVISION RESTRICTIONS, OWNERSHIP, TITLE EVIDENCE OR ANY OTHER FACTS WHICH AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE FOR SUBJECT PROPERTY OR FOR ADJOINING PARCELS WAS MADE AS A PART OF THIS PROJECT. THE ENGINEER HAS RELIED UPON THE MATERIALS AND REPRESENTATIONS SUPPLIED BY THE OWNER WITH REGARD TO THESE MATTERS.
6. ANY TITLE LINES AND BOUNDARY DATA SHOWN ARE APPROXIMATE AND ARE BASED ON RECORD INFORMATION AND ARE NOT THE RESULT OF A BOUNDARY OR LAND SURVEY.
7. SEE MUNICIPAL ORDINANCES AND REGULATIONS FOR ZONING, SETBACK AND BUILDING STANDARD REQUIREMENTS.
8. EACH CONTRACTOR OR SUBCONTRACTOR SHALL SECURE ALL REQUIRED INSURANCE COVERAGE PRIOR TO COMMENCING WORK AND PROVIDE EVIDENCE OF SUCH TO OWNER.
9. CONTRACTORS' ATTENTION IS CALLED TO CURRENT LOCAL, STATE, AND FEDERAL (OSHA) SAFETY REGULATIONS AND GUIDELINES. CONTRACTORS AND THEIR EMPLOYEES SHALL BE FAMILIAR WITH THESE REGULATIONS AND GUIDELINES AND SHALL STRICTLY ADHERE TO THEM.
10. ALL WORK AS SET FORTH IN THE CONTRACT DOCUMENTS SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY STATED OTHERWISE. ALL MATERIALS CALLED FOR IN THESE PLANS OR REFERENCED SPECIFICATIONS SHALL BE FURNISHED AS INCIDENTAL TO THE CONSTRUCTION OF THE VARIOUS IMPROVEMENTS.
11. CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT BUSINESSES AND HOMES AT ALL TIMES. CONTRACTOR SHALL SCHEDULE WORK, PREPARE DETOURS AND CONSTRUCT TEMPORARY BRIDGES OR RAMPS AS NECESSARY TO PROVIDE FOR ACCESS. THIS WORK SHALL BE INCIDENTAL TO THE OVERALL PROJECT WORK.
12. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, BERNS, CLANCY AND ASSOCIATES, PHONE (217-384-1144) FAX (217-384-3355), OR OWNER'S REPRESENTATIVE (BRUCE ROTH-PHONE: 217-383-3535, FAX: 217-383-3540) AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO STARTING OR RESTARTING ANY CONSTRUCTION.
13. ALL CONSTRUCTION WORK PERFORMED OR EQUIPMENT AND MATERIALS SUPPLIED WILL BE SUBJECT TO OBSERVATION BY THE ENGINEER OR OWNER'S REPRESENTATIVE. WORK PERFORMED WITHOUT OBSERVATION BY THE ENGINEER OR OWNER'S REPRESENTATIVE MAY BE REJECTED. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER OR OWNER'S REPRESENTATIVE IN ADVANCE OF ALL CONSTRUCTION ACTIVITIES TO ASSURE COMPLIANCE WITH THIS PROVISION.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION LAYOUT AND PROTECTION OF THOSE CONTROL POINTS, OFFSET AND GRADE STAKES.
15. THE CONTRACTOR SHALL COORDINATE HIS ACTIVITIES WITH THE OWNER AND SHALL ACQUIRE ALL PERMITS AND CONTACT ALL AGENCIES INVOLVED FOR FINAL APPROVALS NEEDED BEFORE CONSTRUCTION WORK BEGINS.
16. VARIOUS UNDERGROUND AND SURFACE STRUCTURES AND UTILITIES MAY OR MAY NOT BE SHOWN ON THE PLANS. THE LOCATION AND DIMENSIONS OF SUCH STRUCTURES AND UTILITIES WHERE GIVEN DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE STRUCTURES AND UTILITIES ARE PLOTTED ON THE PLANS FOR INFORMATION OF THE CONTRACTOR, BUT INFORMATION SO GIVEN IS NOT TO BE CONSTRUED AS A REPRESENTATION THAT SUCH STRUCTURES AND UTILITIES WILL BE FOUND OR ENCOUNTERED AS PLOTTED. OTHER STRUCTURES AND UTILITIES MAY ALSO BE ENCOUNTERED WHICH ARE NOT SHOWN ON THE PLANS.
17. BEFORE BEGINNING WORK THE CONTRACTOR SHALL CONTACT J.U.L.I.E. AND ANY COMPANIES MAINTAINING UTILITIES AND THE OWNER AND REQUEST THEIR ASSISTANCE IN FIELD LOCATING UTILITIES IN THAT AREA. THE CONTRACTOR, HOWEVER, SHALL BE SOLELY RESPONSIBLE FOR THE LOCATION OF UTILITIES.
18. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE HIS ACTIVITIES WITH UTILITY COMPANIES TO "HOLD" UTILITY POLES AND PROTECT UTILITY COMPANY FACILITIES DURING THE CONSTRUCTION ACTIVITIES.
19. THE CONTRACTOR SHALL MAINTAIN IN OPERATING CONDITION ALL UTILITIES ENCOUNTERED IN THIS WORK.
20. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT AND TO COORDINATE WITH THE APPROPRIATE UTILITY COMPANIES CONCERNING ANY MODIFICATIONS TO THEIR SYSTEMS NECESSARY TO PROPERLY ACCOMMODATE THE REQUIREMENTS OF THE PROPOSED IMPROVEMENTS.
21. EXISTING UTILITIES MAY BE RELOCATED WITH THE APPROVAL OF THE OWNER OF THE UTILITY. THIS RELOCATION SHALL BE AT THE CONTRACTOR'S EXPENSE, DONE ACCORDING TO THE REQUIREMENTS OF THE UTILITY OWNER AND SHALL BE SUFFICIENT TO CLEAR THE PROPOSED IMPROVEMENT.
22. THE CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR ALL INJURIES TO WATER PIPES, ELECTRIC CONDUITS, SANITARY SEWERS, EXISTING DRAINS OR SEWERS, GAS PIPES, POLES CARRYING CURRENT, AND TELEPHONE OR TELEGRAPH LINES DURING THE EXECUTION OF THE WORK, AND SHALL BE LIABLE FOR DAMAGES TO PUBLIC OR PRIVATE PROPERTY RESULTING THEREFROM WHICH AMOUNT MAY BE DEDUCTED FROM ANY MONIES DUE HIM FOR WORK DONE.
23. ANY DAMAGE TO EXISTING UTILITIES AS A RESULT OF THIS CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER OF THE UTILITY AT THE CONTRACTOR'S EXPENSE, WHETHER OR NOT SAID UTILITIES ARE SHOWN ON THE DRAWINGS.
24. EXISTING PAVEMENTS NOT SCHEDULED FOR DEMOLITION THAT ARE DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE REPLACED BY THE CONTRACTOR AT HIS SOLE EXPENSE AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
25. ALL EXISTING FACILITIES AND IMPROVEMENTS IN THE TEMPORARY CONSTRUCTION EASEMENTS MUST BE PRESERVED AND PROTECTED OR REMOVED, PROTECTED AND RESET BY THE CONTRACTOR, AT OR NEAR ITS ORIGINAL LOCATION. SUCH PROTECTION WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT WORK.
26. ALL SURVEY MONUMENTS WITHIN CONSTRUCTION LIMITS SHALL BE PRESERVED AND PROTECTED, OR THEIR LOCATION SHALL BE OBSERVED BY AN ILLINOIS PROFESSIONAL LAND SURVEYOR (IPLS), REMOVED, AND LATER RESET BY THE IPLS AT THE CONTRACTOR'S EXPENSE. SUCH WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
27. CARE SHALL BE TAKEN WHEN REMOVING CONCRETE OR OTHER STRUCTURES TO PRESERVE AND PROTECT IMPROVEMENTS NOT INDICATED TO BE REMOVED.
28. ALL PRIVATE IMPROVEMENTS SUCH AS MAILBOXES, SIGNS AND PLANTERS, AND PUBLIC IMPROVEMENTS SUCH AS STREET SIGNS, SIGN POLES, LIGHT POLES AND OTHER SIMILAR INCIDENTAL ITEMS ENCOUNTERED IN THE WAY OF CONSTRUCTION SHALL BE REMOVED AND RESET IN THEIR ORIGINAL LOCATION OR NEW LOCATION AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
29. EXISTING TREES WITHIN PROJECT LIMITS ARE TO BE SAVED, EXCEPT THOSE DESIGNATED FOR REMOVAL. THE ENGINEER OR OWNER'S REPRESENTATIVE SHALL DESIGNATE TREES FOR REMOVAL AT THE START OF TREE REMOVAL ACTIVITIES.
30. ALL PRIVATE IMPROVEMENTS SUCH AS TREES, SHRUBS, CULVERT HEADWALLS, STONE RIP-RAP ALONG DRIVEWAYS, RAILROAD TIE DRIVEWAY OR YARD EDGING, FENCES, ORNAMENTS, OR ANY OTHER PRIVATE SURFACE OR SUBSURFACE IMPROVEMENT LOCATED IN THE PUBLIC RIGHT-OF-WAY OR IN PERMANENT EASEMENTS, ARE TO BE CAREFULLY REMOVED AND SET ASIDE BY THE CONTRACTOR. SUCH ITEMS SHALL NOT BE RESET BY THE CONTRACTOR. EXCEPTIONS INCLUDE DRIVEWAY CULVERTS, MAILBOXES, SUMP PUMP OUTLETS, AND DRIVEWAY SURFACES WHICH SHALL BE RESET BY THE CONTRACTOR.
31. THE NEED FOR REPLACEMENT AND REPAIR OF ANY FIELD TILE OR FIELD TILE OUTLETS ENCOUNTERED DURING CONSTRUCTION WILL BE DETERMINED BY THE ENGINEER OR OWNER'S REPRESENTATIVE. THE REPAIR AND REPLACEMENT OF FIELD TILE OR FIELD TILE OUTLETS NOT SHOWN ON THE PLANS SHALL BE CONSIDERED AS AN EXTRA.
32. THE CONTRACTOR SHALL DISPOSE OF LANDSCAPE DEBRIS, CONCRETE, AND DEMOLITION DEBRIS SHALL BE DISPOSED OF OFF-SITE IN A LEGAL MANOR.
33. CONTRACTOR SHALL PROTECT ANY NEW CONCRETE SURFACES AGAINST VANDALISM AND SURFACE DEFECTS. ANY DAMAGED CONCRETE SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
34. THE CONTRACTOR SHALL BE REQUIRED TO BACKFILL TRENCHES AND CLEAN-UP THE CONSTRUCTION AREA. BACKFILLING SHALL BE ACCORDING TO THE DETAILS SHOWN ON THE PLANS.
35. ALL GRADING SHALL BE DONE IN ACCORDANCE WITH SPOT ELEVATIONS, GRADES, AND FLOW ARROWS AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
36. FINISHED SURFACES SHOULD MATCH SURROUNDING GROUND, WITH ALLOWANCE FOR SETTLEMENT, OR AS OTHERWISE DIRECTED BY THE CONTRACT DOCUMENTS.
37. PAYMENT FOR CONSTRUCTION ITEMS SHALL BE MEASURED AND PAID FOR AS INDICATED IN THE STANDARD SPECIFICATIONS, AS SHOWN ON THE SPECIAL PROVISIONS AND TECHNICAL SPECIFICATIONS, AND AS INDICATED ON THE PLANS.

EXCAVATION NOTES

1. EARTH EXCAVATION AND EMBANKMENT CONSTRUCTION (FILL FOR DRIVEWAY CONSTRUCTION) SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS 202, 204, 205 AND 212 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", AS HEREIN AMENDED AND MODIFIED.
2. LIMITED SUBSURFACE SOIL INVESTIGATIONS HAVE BEEN PERFORMED. SEE SUBSURFACE EXPLORATION AND GEOTECHNICAL EVALUATION BY M. E. T. DATED SEPTEMBER 18, 2014. THE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE SITE, MAKE HIS OWN INVESTIGATIONS AS HE DEEMS NECESSARY AND BE FULLY RESPONSIBLE FOR HIS INTERPRETATION OF AVAILABLE SOIL DATA, OR ITS EXTRAPOLATION TO OTHER LOCATIONS EITHER VERTICALLY OR HORIZONTALLY FROM THE LOCATION OF HIS OWN INVESTIGATIONS OR FROM THE LOCATION OF INDIVIDUAL SAMPLES.
3. ORGANIC SOILS (TOPSOIL) FROM EXCAVATIONS AROUND THE SITE SHALL BE STRIPPED AND STOCKPILED DURING CONSTRUCTION AND SPREAD ON THE TOP OF DISTURBED AREAS. THE ENGINEER SHALL DETERMINE SOILS SUITABLE FOR USE AS TOPSOIL DURING CONSTRUCTION. FOR EMBANKMENT AREAS THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. SUBSOIL SHALL BE EXCAVATED AND STOCKPILED SEPARATELY. AFTER CONSTRUCTION, SUBSOIL SHALL FIRST BE PLACED IN TRENCHES AND COMPACTED. NEXT, TOPSOIL SHALL BE SPREAD OVER DISTURBED AREAS (A MINIMUM OF SIX (6) INCH THICKNESS) AT THE DIRECTION OF ENGINEER. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
4. THE CONTRACTOR SHALL EXCAVATE THE EXISTING MATERIAL ENCOUNTERED, SHALL FILL AND COMPACT MATERIAL AND SHALL GRADE IMPROVEMENTS CONTAINED IN THIS CONTRACT IN ACCORDANCE WITH LINES, GRADES, SPOT ELEVATIONS, FLOW ARROWS, PROFILES, AND CROSS SECTIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER OR THE OWNER'S REPRESENTATIVE IN THE FIELD.
5. NO SPECIAL PROVISION WILL BE MADE FOR ROCK EXCAVATION. ANY BOULDERS ENCOUNTERED SHALL BE REMOVED AND DISPOSED OF OFF-SITE. THE TOP 5 FEET OF ALL TRENCHES SHALL NOT BE BACKFILLED WITH SOIL CONTAINING ROCKS THAT THAT ARE LARGER THAN 3 INCHES IN DIAMETER.
6. EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROPRIATE LOCATION OFF-SITE.
7. ALL LANDSCAPE AREAS SHALL BE GRADED TO DRAIN. FINISHED SURFACES SHOULD MATCH SURROUNDING GROUND WITH ALLOWANCE FOR SETTLEMENT, OR AS OTHERWISE DIRECTED BY THE CONTRACT DOCUMENTS.

DEMOLITION NOTES

1. ALL DEMOLITION WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS, AND THE NOTES AND DETAILS IN THESE PLANS.
2. THE CONTRACTOR SHALL BARRICADE THE WORK AREAS TO KEEP PEDESTRIANS RESTRICTED FROM CONSTRUCTION ACTIVITIES AT ALL TIMES.
3. CARE SHALL BE TAKEN WHEN REMOVING CONCRETE OR OTHER STRUCTURES ADJACENT TO IMPROVEMENTS TO REMAIN TO PRESERVE AND PROTECT THOSE ADJACENT IMPROVEMENTS. CONTRACTOR SHALL REPAIR OR REMOVE AND REPLACE EXISTING ADJACENT IMPROVEMENTS THAT ARE DAMAGED AT HIS OWN EXPENSE, AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
4. CLEARING ALONG THE ROUTE OF STREETS, WATER MAIN, STORM SEWER, AND SANITARY SEWER WILL BE REQUIRED SUFFICIENT ONLY TO ENABLE THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS AND SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
5. TREES, STUMPS, ROOTS, RUBBISH, TRASH, CONCRETE, PAVEMENT MATERIALS AND OTHER DEMOLITION DEBRIS SHALL BE DISPOSED OF OFF-SITE IN AN APPROPRIATE AND LAWFUL MANNER. ITEMS ENCOUNTERED WHICH REQUIRE REMOVAL AND FOR WHICH NO ITEMIZED DEMOLITION OR REMOVAL QUANTITY IS SHOWN ON THE PLANS SHALL BE REMOVED AND DISPOSED OF INCIDENTAL TO THE WORK AND NO SEPARATE OR ADDITIONAL COMPENSATION SHALL BE ALLOWED.
6. ITEMS ENCOUNTERED WHICH REQUIRE REMOVAL AND FOR WHICH NO ITEMIZED DEMOLITION OR REMOVAL QUANTITY IS SHOWN ON THE PLANS SHALL BE REMOVED AND DISPOSED OF INCIDENTAL TO THE WORK AND NO SEPARATE OR ADDITIONAL COMPENSATION SHALL BE ALLOWED.

DESIGNED:	CB/RM
DRAFTED:	PE
CHECKED:	CB/ELC/TBB
FILE:	2612-51P1

REVISIONS

BERNS, CLANCY AND ASSOCIATES
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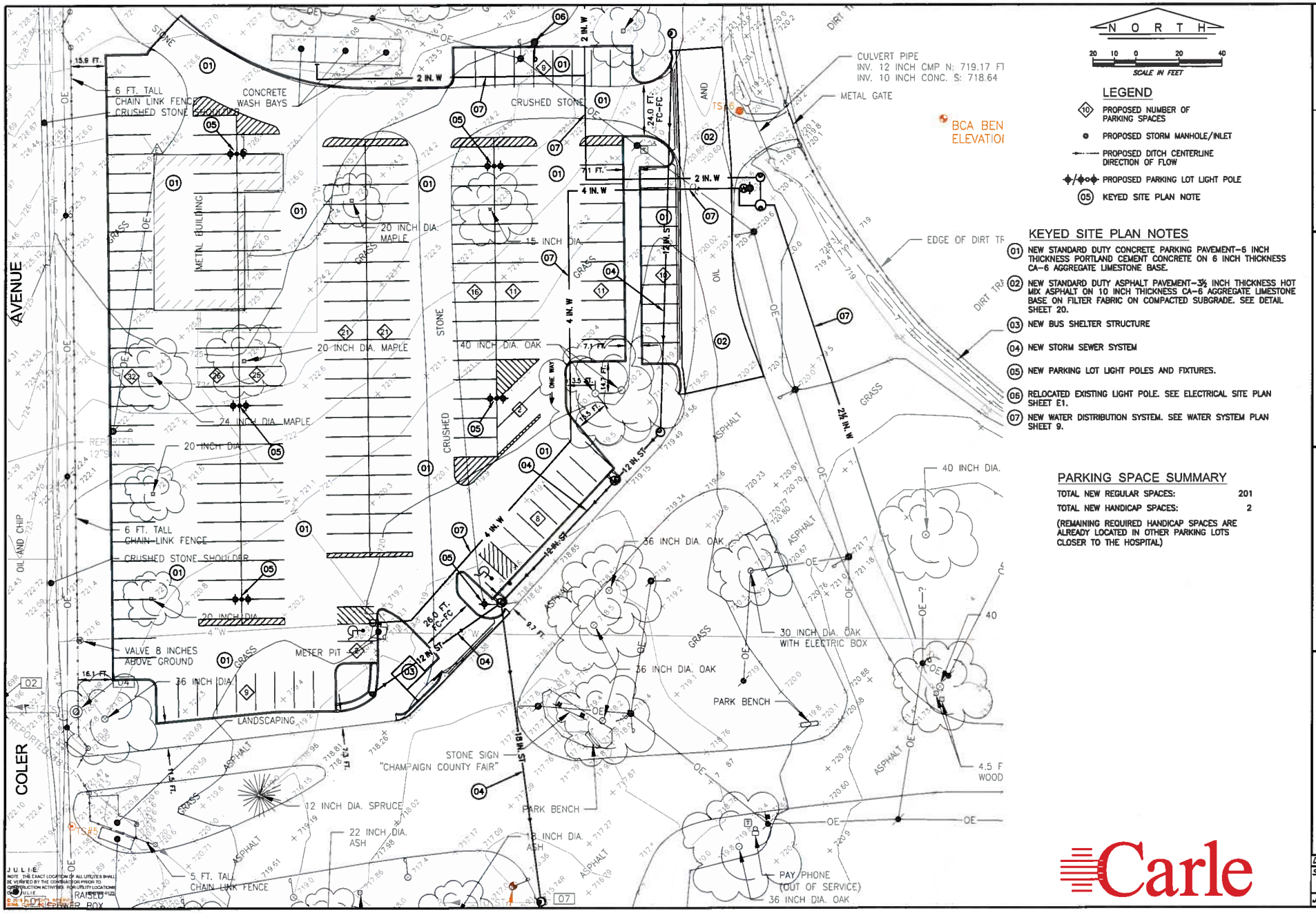
Carle

CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP,
CHAMPAIGN COUNTY, ILLINOIS

PROJECT NOTES

DATE: 050616
SHEET: 4 OF 27
JOB: 2612-51



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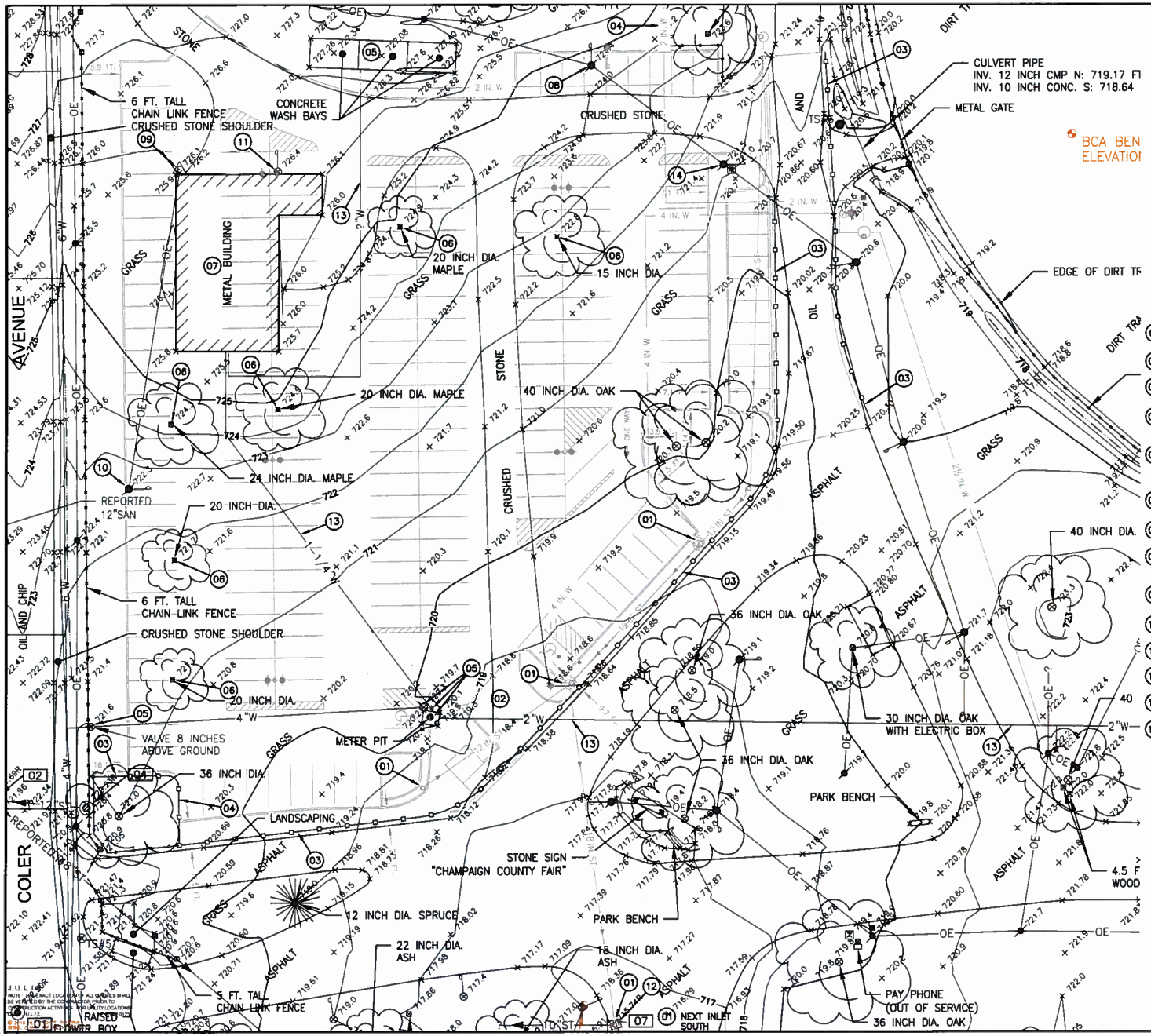
REVISIONS			
DESIGNED:	CB/RDM		
DRAFTED:	PE		
CHECKED:	CB/ELC/TBB		
FILE:	2612-51P1.DWG		

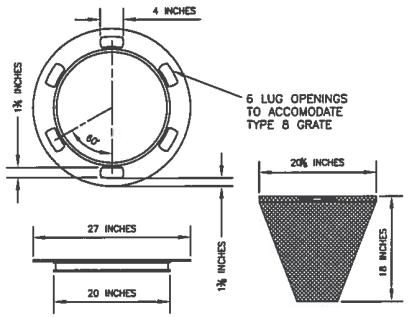
CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS
PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP,
CHAMPAIGN COUNTY, ILLINOIS

SITE PLAN

DATE: 050616
SHEET: 5 OF 27
JOB: 2612-51

Carle


N O R T H
20 10 0 20 40
SCALE IN FEET
LEGEND
PROPOSED STORM MANHOLE/INLET
PROPOSED DITCH CENTERLINE DIRECTION OF FLOW
PROPOSED EROSION CONTROL SILT FENCE
PROPOSED TREE PROTECTION
KEYED DEMOLITION/EROSION CONTROL NOTE
KEYED DEMOLITION NOTES / EROSION CONTROL NOTES
01 INSTALL AND MAINTAIN INLET EROSION/SEDIMENT CONTROL MEASURE. SEE DETAILS SHEET 7.
02 INSTALL CONSTRUCTION ENTRANCE. SEE DETAIL SHEET 7.
03 INSTALL PERIMETER SILT FENCE/SILT DIKE. SEE DETAILS SHEET 7.
04 INSTALL TREE PROTECTION FENCING. SEE DETAIL SHEET 8. SAW CUT TREE ROOTS AT 18 INCH DEPTH AT A MAXIMUM OF 6 INCHES OUTSIDE OF PROPOSED IMPROVEMENTS.
05 PRESERVE AND PROTECT EXISTING 4-INCH WATER SERVICE. RELOCATE HYDRANT AND METER PIT AND REVISE WATER DISTRIBUTION SYSTEM AS NOTED ON WATER SYSTEM PLAN SHEET 9.
06 REMOVE EXISTING TREE/STUMP/ROOTS.
07 EXISTING METAL BUILDING TO BE REMOVED BY CARLE FOUNDATION HOSPITAL.
08 RELOCATE EXISTING UTILITY POLE AND OVERHEAD LIGHT TO THE NORTH OF THE NEW PARKING. SEE ELECTRICAL SITE PLAN SHEET E1. PROTECT EXISTING OVERHEAD WIRING.
09 DISCONNECT AND RETIRE EXISTING BUILDING ELECTRIC SERVICE AT TRANSFORMER (BY CARLE FOUNDATION HOSPITAL).
10 REMOVE EXISTING UTILITY POLE, OVERHEAD LIGHT, AND OVERHEAD WIRING.
11 REMOVE EXISTING LIGHT POLE.
12 REMOVE EXISTING INLET. SALVAGE EXISTING CASTING FOR RE-USE. SEE UTILITY PLAN SHEET 11 FOR MORE DETAILS.
13 ABANDON EXISTING WATER DISTRIBUTION PIPES IN PLACE.
14 PROTECT EXISTING LIGHT POLE.
CULVERT PIPE
INV. 12 INCH CMP N: 719.17 FT
INV. 10 INCH CONC. S: 718.64
METAL GATE
EDGE OF DIRT TR
6 FT. TALL CHAIN LINK FENCE
CRUSHED STONE SHOULDER
CONCRETE WASH BAYS
METAL BUILDING
20 INCH DIA. MAPLE
15 INCH DIA.
40 INCH DIA. OAK
24 INCH DIA. MAPLE
REPORTED 12"SAN
20 INCH DIA.
36 INCH DIA. OAK
30 INCH DIA. OAK WITH ELECTRIC BOX
VALVE 8 INCHES ABOVE GROUND
METER PIT
36 INCH DIA.
LANDSCAPING
PARK BENCH
STONE SIGN "CHAMPAIGN COUNTY FAIR"
12 INCH DIA. SPRUCE
22 INCH DIA. ASH
18 INCH DIA. ASH
5 FT. TALL CHAIN LINK FENCE
RAISED FLOWER BOX
PAY PHONE (OUT OF SERVICE)
NEXT INLET SOUTH
4.5 F WOOD
AVENUE
COLER
GRASS
ASPHALT
STONE
CRUSHED
OIL AND CHIP
DESIGNED: CB/RDM
DRAFTED: PE
CHECKED: CB/ELC/TBB
FILE: 2612-51P1.DWG
REVISIONS
BERNS, CLANCY AND ASSOCIATES
ENGINEERS • SURVEYORS • PLANNERS
401 EAST MAIN STREET - POST OFFICE BOX 1705
URBANA, ILLINOIS 61803-1705
PHONE: (217) 384-1144 - FAX: (217) 384-3355
CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS
PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP,
CHAMPAIGN COUNTY, ILLINOIS
DEMOLITION PLAN
EROSION CONTROL PLAN
DATE: 050616
SHEET: 6 OF 27
JOB: 2612-51
Carle

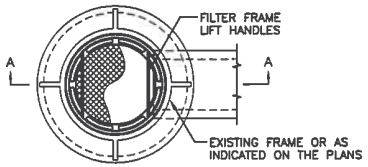


NOTES:

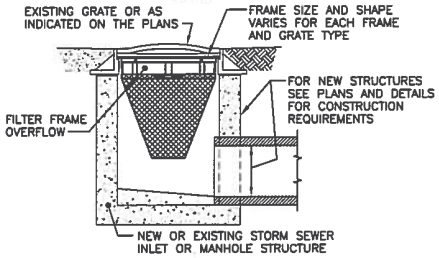
1. FRAME TOP FLANGE FABRICATED FROM 1/8 INCH FLAT STOCK. BASE RIM FABRICATED FROM 1½ INCH BY ½ INCH BY 1/8 INCH. CHANNEL. ALL DOMESTIC STEEL CONFORMING TO ASTM-A36.
2. SEDIMENT BAG FABRICATED FROM 4 OUNCES PER SQUARE YARD NON-WOVEN POLYPROPYLENE GEOTEXTILE REINFORCED WITH POLYESTER MESH. BAG SECURED TO BASE RIM WITH A STAINLESS STEEL STRAP AND LOCK.

SEDIMENT BAG FRAME AND FILTER

(TYPE 8 GRATE ONLY)
NO SCALE



(ROUND FRAME SHOWN WITHOUT GRATE)
PLAN



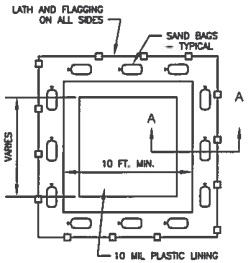
SECTION A-A

NOTES:

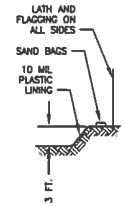
1. FILTER FRAMES FOR SEDIMENT BAGS SHALL BE SHAPED TO FIT INTO THE REQUIRED INLET OR MANHOLE FRAME AND GRATES. THE FILTER FRAME SHALL HAVE AN OVERFLOW FEATURE. THE SEDIMENT BAGS SHALL HAVE A SUPPORTING NET CAPABLE OF SUPPORTING A FULL SEDIMENT BAG.
2. CONTRACTOR WILL BE REQUIRED TO CHECK AND EMPTY SEDIMENT BAGS AFTER EACH RAIN AND AT SUCH INTERVALS NEEDED TO CONTROL SILT BUILDUP. THE CONTRACTOR SHALL REPLACE ANY DAMAGED SEDIMENT BAGS WHEN DISCOVERED.
3. UTILIZATION OF SILT FENCE FABRIC IN OR ACROSS AN INLET CASTING SHALL NOT BE PERMITTED.

INLET SEDIMENT BAG INSTALLATION

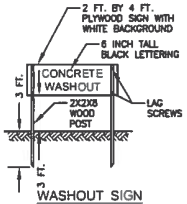
NO SCALE



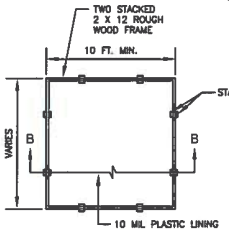
BELOW GRADE TYPE
(PREFERRED METHOD)



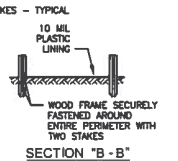
SECTION "A-A"



WASHOUT SIGN



ABOVE GRADE TYPE



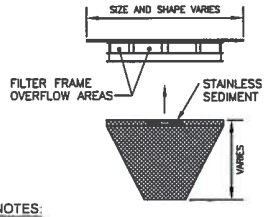
SECTION "B-B"

NOTES:

1. PORTLAND CEMENT CONCRETE (PCC) AND ASPHALT CONCRETE (AC) WASTES SHALL BE COLLECTED OR PLACED IN A CONCRETE WASHOUT FACILITY AND DISPOSED OF. NO PCC OR AC WASTES SHALL ENTER THE STORM SEWER SYSTEM OR WATERCOURSES.
2. A SIGN SHALL BE INSTALLED ADJACENT TO EACH FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE PROPER FACILITIES.
3. BELOW GRADE FACILITIES ARE PREFERRED. ABOVE GRADE FACILITIES MAY BE UTILIZED IF EXCAVATION IS NOT PRACTICAL.
4. WASHOUT FACILITIES SHALL HAVE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND WASTE CONCRETE MATERIALS GENERATED BY WASHOUT AND CONSTRUCTION ACTIVITIES.
5. ONCE CONCRETE WASTES ARE DISCHARGED TO FACILITIES AND ALLOWED TO HARDEN, THE CONCRETE WASTE SHALL BE BROKEN UP AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL LAWS, REGULATIONS AND REQUIREMENTS.
6. PLASTIC LINING SHALL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
7. A MINIMUM FREEBOARD OF 12 INCHES IS REQUIRED FOR BELOW GRADE FACILITIES AND A MINIMUM OF 4 INCHES FREEBOARD IS REQUIRED FOR ABOVE GRADE FACILITIES.
8. WHEN FACILITIES ARE NO LONGER REQUIRED FOR CONSTRUCTION WORK, THE MATERIALS USED TO CONSTRUCT THE FACILITIES SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL LAWS, REGULATIONS AND REQUIREMENTS.
9. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY REMOVAL OF THE FACILITIES SHALL BE BACKFILLED AND RESTORED TO PRE-EXISTING CONDITIONS OR TO INTENDED USE.
10. FACILITIES MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED ONCE THE WASHOUT IS 75% FULL.
11. REMOVE AND DISPOSE OF HARDENED CONCRETE MATERIALS TO RETURN FACILITIES TO A FUNCTIONAL CONDITION.
12. CONTRACTOR SHALL INSPECT WASHOUT FACILITIES ON A MINIMUM OF A WEEKLY BASIS.

CONCRETE WASHOUT FACILITY

NO SCALE



NOTES:

1. FRAME TOP FLANGE FABRICATED FROM 1/8 INCH FLAT STOCK. BASE RIM FABRICATED FROM 1½ INCH BY ½ INCH BY ⅛ INCH. CHANNEL. ALL DOMESTIC STEEL CONFORMING TO ASTM-A36.
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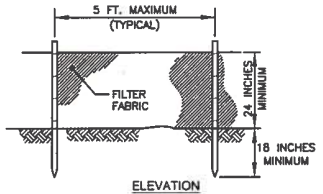
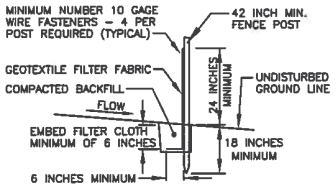
SEDIMENT BAG FILTER AND FRAME INSERT

NO SCALE



ELEVATION



FABRIC ANCHOR DETAIL

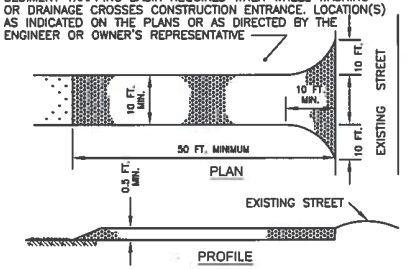
NOTES:

1. TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERILA SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS I WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN
3. FENCE POSTS SHALL BE EITHER STANDARD STEEL POST OR WOOD POST WITH A MINIMUM CROSS-SECTIONAL AREA OF 3.0 SQUARE INCHES.
4. SILT FENCE WITHIN THE DRIPLINE OF TREES TO REMAIN SHALL NOT BE EMBEDDED INTO THE SOIL. THE BOTTOM 12 INCHES OF SILT FENCE FABRIC SHALL BE HELD IN PLACE WITH CONTINUOUS SAND BAGS OR OTHER "GROUND CONFORMING" WEIGHT SUITABLE TO HOLD FABRIC IN PLACE. "LAP" SILT FENCE FABRIC IN TRANSITION AREAS TO PROVIDE CONTINUOUS EROSION CONTROL PROTECTION.
5. SILT DIKE MAY BE USED IN LIEU OF SILT FENCE.

PERIMETER BARRIER SILT FENCE

NO SCALE

SEDIMENT TRAPPING BASIN REQUIRED WHEN WHEEL WASHING OR DRAINAGE CROSSES CONSTRUCTION ENTRANCE. LOCATION(S) AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE



NOTES:

1. STONE SIZE - USE 2 INCH DIAMETER OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN FIFTY (50) FEET LONG (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH MAY APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCUR.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, THE FLOW SHOULD BE DIVERTED. AN APPROVED SEDIMENT TRAPPING DEVICE MAY BE REQUIRED BY THE ENGINEER'S OR OWNER'S REPRESENTATIVE. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
8. WASHING - WHEELS AND UNDERSIDE OF VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO A SEDIMENT TRAPPING DEVICE AS APPROVED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
9. CONTRACTOR MAY LOCATE CONSTRUCTION ENTRANCES TO ACCOMMODATE CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE PUBLIC ROAD AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLATION. WHEN CONSTRUCTION ENTRANCES MUST BE LOCATED IN AREAS WITH EXISTING STREET CURBS; WHERE POSSIBLE, LOCATE CONSTRUCTION ENTRANCES WHERE EXISTING STREET CURBS WILL BE REMOVED AS PART OF THE PROJECT. EXISTING STREET CURBS TO REMAIN MUST BE PROTECTED FROM DAMAGE IN AN APPROPRIATE MANNER SUCH AS RAMPS BUILT OF 6 INCH BY 6 INCH POSTS, 4 INCH BY 4 INCH POSTS AND 2 INCH BY 4 INCH TREATED LUMBER OR "COLD PATCH" OVER 4 INCH DIAMETER CONDUIT TO ALLOW GUTTER FLOW. CONTRACTOR SHALL REMOVE AND REPLACE ANY STREET CURBS DAMAGED DURING CONSTRUCTION.

STABILIZED CONSTRUCTION ENTRANCE

NO SCALE

DESIGNED:	CB/RM	REVISIONS
DRAFTED:	PE	
CHECKED:	CB/ELC/TBB	
FILE:	2612-51P1	

BERNS, CLANCY AND ASSOCIATES
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Carle

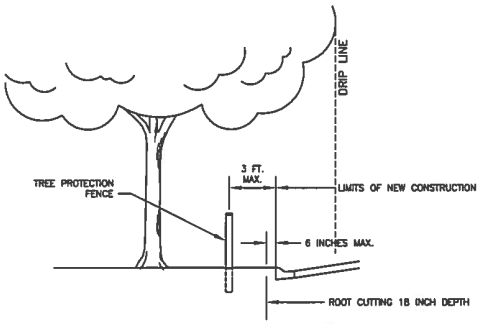
CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP,
CHAMPAIGN COUNTY, ILLINOIS

EROSION CONTROL DETAILS AND NOTES

DATE: 050616
SHEET: 7 OF 27
JOB: 2612-51

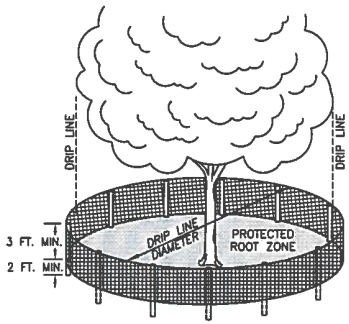
TREE PROTECTION NOTES

1. CARE AND PROTECTION OF EXISTING TREES AND SHRUBS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION, THE DETAILS AND NOTES CONTAINED IN THE PLANS, AND AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
2. EXISTING TREES AND SCRUBS WITHIN THE PROTECT AREA AND THOSE INDICATED BY THE ENGINEER OR OWNER'S REPRESENTATIVE SHALL BE PROTECTED FROM DAMAGE UNLESS INDICATED ON THE PLANS TO BE REMOVED OR DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
3. THERE SHALL BE NO STOCKPILING OR STORAGE OF MATERIALS, TOOLS, OR EQUIPMENT WITHIN THE DRIP LINE OF ANY TREE TO BE SAVED DURING CONSTRUCTION ACTIVITIES.
4. THE CITY ARBORIST OR AN ARBORIST DESIGNATED BY THE ENGINEER OR OWNER'S REPRESENTATIVE SHALL INSTRUCT THE CONTRACTOR IN THE PROCEDURES TO BE USED TO TRIM BRANCHES WHICH INTERFERING WITH THE WORK.
5. PRIOR TO EXCAVATION NEAR AN EXISTING TREE TO REMAIN, THE CONTRACTOR SHALL USE A VERMEER ROOT CUTTER, OR AN APPROVED STUMP GRINDER, TO CLEANLY CUT ALL ROOTS TO A MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES AT A DISTANCE OF AT LEAST 10 FEET FROM THE TRUNK OF THE TREE. RIPPING, SHREDDING, CHOPPING OR TEARING OF ROOTS WILL NOT BE PERMITTED. USE OF AN AX, HATCHET, MACHETE, SHEARS, OR KNIFE WILL NOT BE ALLOWED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE TO ASSURE THAT ALL TREES AND SHRUBS DESIGNATED TO REMAIN SHALL BE MAINTAINED IN GOOD CONDITION AND ALIVE THROUGHOUT THE COURSE OF THE PROJECT. SHOULD ANY TREE OR SHRUB DESIGNATED TO REMAIN BE DAMAGED OR DIE, THE CONTRACTOR SHALL REPAIR THE TREE IN ACCORDANCE WITH AN ARBORIST DESIGNATED BY THE ENGINEER OR OWNER'S REPRESENTATIVE, OR REPLACE THAT TREE OR SHRUB WITH A LIKE SPECIES AND SIZE AT NO COST TO THE OWNER.
7. TREES AND SHRUBS TO BE REPLACED SHALL BE OF A SIZE AND TYPE TO MATCH THE DAMAGED TREE OR SHRUB. TREE REMOVAL AND REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 253 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
8. WORK FOR PROTECTION OF TREES AND SHRUBS, INCLUDING NEWLY PLANTED TREES AND SHRUBS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.



NOTES:

1. UTILIZE A ROOT SAW TO CUT EXISTING TREE ROOTS 18 INCH DEPTH, A MAXIMUM OF 6 INCHES OUTSIDE NEW CONSTRUCTION.
2. INSTALL TREE PROTECTION FENCE A MAXIMUM OF 3 FEET OUTSIDE OF NEW CONSTRUCTION.
3. EROSION CONTROL FENCE MAY SERVE AS TREE PROTECTION FENCE WHERE APPROPRIATE. SEE EROSION CONTROL DETAILS.



NOTES:

1. FENCE POSTS MAY BE WOODEN, 2 INCHES BY 4 INCHES BY 5 FT. (MINIMUM) OR THOSE APPROVED BY THE ENGINEER OR OWNER'S REPRESENTATIVE, ON 6 FT. MAXIMUM CENTERS.
2. FENCING MATERIAL SHALL BE ORANGE COPOLYMER BARRIER FENCE FASTENED TO EACH POST AT THREE LOCATIONS.
3. NO CONSTRUCTION MATERIALS, DEBRIS, OR EXCAVATED MATERIALS SHALL BE STORED WITHIN THE PROTECTED ROOT ZONE.
4. ANY TRENCHING REQUIRED WITHIN THE PROTECTED ROOT ZONE SHALL BE HAND EXCAVATED AROUND OR UNDER ROOTS. CUT NO LATERAL ROOTS OR TAP ROOTS. WHEN CUTTING SMALLER ROOTS THAT INTERFERE WITH NEW CONSTRUCTION MAKE ALL CUTS CLEANLY AT 90 DEGREES.
5. BRANCHES SHALL BE PRUNED IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICES TO BALANCE ANY LOSSES TO ROOT SYSTEM CAUSED BY DAMAGE OR CUTTING ROOT SYSTEM.

TREE PROTECTION
(OUTSIDE OF RIGHT-OF-WAY)
NO SCALE

EROSION CONTROL NOTES

1. ALL LANDSCAPING WORK SHALL COMPLY WITH SECTION 250 AND EROSION CONTROL WORK SHALL COMPLY WITH SECTION 280 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS, AND THE NOTES AND DETAILS CONTAINED IN THESE PLANS.
2. CONTRACTOR SHALL STRICTLY ADHERE TO ALL NPDES PERMIT REQUIREMENTS AND SHALL ASSUME ALL RESPONSIBILITY FOR MAINTAINING TEMPORARY EROSION CONTROL MEASURES AT ALL TIMES.
3. ALL WORK AS SET FORTH IN THE CONTRACT DOCUMENTS SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY STATED OTHERWISE.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR TEMPORARY EROSION CONTROL PLANS FOR CONSTRUCTION ACTIVITIES ON SITE IN ADDITION TO AN "OFF-SITE TRACKING CONTROL PLAN" TO THE ENGINEER OR OWNER'S REPRESENTATIVE FOR APPROVAL, AT LEAST SEVEN (7) BUSINESS DAYS PRIOR TO ANY EXCAVATION ON THE SITE. THE PLAN SHALL INCLUDE PERTINENT MANUFACTURER'S DATA AND DETAILS AND TEST DATA TO DESCRIBE THE MEANS AND METHODS THAT THE CONTRACTOR PLANS TO USE TO CONTROL TRACKING AND EROSION FROM THE SITE. ACTUAL CONFIGURATION AND LOCATION OF TEMPORARY EROSION CONTROL SYSTEMS SHALL BE AS SHOWN ON THE PLANS, APPROVED TRACKING CONTROL PLAN, APPROVED EROSION CONTROL PLAN, AND AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
5. TEMPORARY EROSION CONTROL MEASURES AS INDICATED IN THE PLANS, APPROVED "TRACKING CONTROL PLAN" OR APPROVED "EROSION CONTROL PLAN" SHALL BE INSTALLED ON THE FIRST DAY OF CONSTRUCTION ACTIVITIES. TRIANGULAR SILT DIKES, SILT FENCES AND OTHER EROSION CONTROL MEASURES SHALL BE INSTALLED TO HELP PREVENT SOIL FROM BEING WASHED OFF SITE OR INTO STORM SEWER OR SANITARY SEWER STRUCTURES. THESE FENCES WILL BE TEMPORARILY REMOVED WHILE THE SHAPING WORK IS BEING DONE AND THEY SHALL THEN BE RESET AND LEFT IN PLACE UNTIL THE SEEDING AND FERTILIZING WORK IS DONE AND A GOOD STAND OF GRASS HAS DEVELOPED. THE CONTRACTOR SHALL INSTALL SEDIMENT COLLECTION BAGS IN STORM SEWER INLETS OR MANHOLES ADJACENT TO INGRESS AND EGRESS POINTS AND AS MAY BE REQUIRED BY THE ENGINEER OR OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL MAINTAIN THESE MEASURES IN AN EFFECTIVE CONDITION AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING ANY STORM SEWER OR SANITARY SEWER STRUCTURES.
6. WHERE DISCONNECTED SILT FENCES ARE USED, OVERLAP THE SILT FENCES TO COVER THE JOINTS.
7. CONTRACTOR SHALL PROVIDE FOR INGRESS AND EGRESS FROM THE SITE ONTO PUBLIC RIGHTS-OF-WAY BY CONSTRUCTING A STABILIZED CONSTRUCTION ENTRANCE AS SHOWN IN THE DETAILS OR APPROVED TRACKING CONTROL PLAN. THE CONTRACTOR SHALL ALSO BE REQUIRED TO WASH THE WHEELS AND UNDERSIDE OF VEHICLES ENTERING RIGHTS-OF-WAY TO REMOVE SEDIMENT AND OTHER SOILS FROM THE VEHICLES. SOILS TRACKED OFF SITE SHALL IMMEDIATELY BE RECOVERED.
8. ALL DISTURBED EARTH SURFACES THAT WILL HAVE BARE SOIL FOR LONGER THAN 45 DAYS SHALL BE TEMPORARILY SEEDED. TEMPORARY SEEDING SHALL BE CLASS 7 PER SECTION 250 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION". SEED SHALL BE PLACED AT A RATE OF NOT LESS THAN 200 POUNDS PER ACRE. THIS WORK SHALL BE INCIDENTAL TO EROSION CONTROL AND WILL NOT BE PAID FOR SEPARATELY.
9. FILTER BARRIERS SHALL BE INSPECTED AT LEAST WEEKLY AND IMMEDIATELY AFTER EACH RAINFALL EVENT AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-THIRD (⅓) THE HEIGHT OF THE BARRIER.
10. DURING EXCAVATION THE CONTRACTOR SHALL BE CAREFUL TO SEGREGATE AND SAVE AS MUCH TOPSOIL AS POSSIBLE FOR PLACEMENT ON TOP OF BACKFILL IN ORDER TO PROVIDE GOOD MATERIAL FOR SEEDING AND FERTILIZING. THE ENGINEER OR OWNER'S REPRESENTATIVE SHALL DETERMINE SOILS SUITABLE FOR USE AS TOPSOIL. NOT LESS THAN SIX (6) INCHES OF TOPSOIL SHALL BE REPLACED UPON TRENCH AREAS AND EXCAVATED AREAS.
11. DISPOSE OF ALL EXCESS EXCAVATED MATERIALS OFF-SITE OR ON SITE AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
12. THE TEMPORARY EROSION CONTROL SYSTEMS INSTALLED BY THE CONTRACTOR SHALL BE PROPERLY MAINTAINED AS DIRECTED BY THE ENGINEER TO CONTROL SILTATION AT ALL TIMES DURING THE LIFE OF THE CONTRACT.
13. SHOULD THE GEOTEXTILE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY AT NO ADDITIONAL COST TO THE OWNER.
14. SHOULD THE CONTRACTOR FAIL TO MAINTAIN EROSION CONTROL MEASURES IN AN EFFECTIVE CONDITION, ALLOW TRACKING OR EROSION ONTO PUBLIC RIGHTS-OF-WAY OR TO AREAS OUTSIDE OF CONSTRUCTION LIMITS, AND FAIL TO CLEAN UP, THE MUNICIPALITY, AGENCY, OR OWNER MAY MAKE CORRECTIONS AT THE CONTRACTOR'S EXPENSE. ANY MONIES OWED TO THE CONTRACTOR MAY BE WITHHELD FOR SUCH EXPENSES.
15. ALL DISTURBED TURF AREAS SHALL BE FINE-GRADED, FERTILIZED, SEEDED AND MULCHED. SEE SURFACE RESTORATION NOTES ON SHEET 15 FOR APPLICATION RATES.
16. ALL GRADING SHALL BE DONE IN ACCORDANCE WITH SPOT ELEVATIONS, GRADES AND FLOW ARROWS AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
17. FINISHED SURFACES SHOULD MATCH SURROUNDING GROUND, WITH ALLOWANCE FOR SETTLEMENT, OR AS OTHERWISE DIRECTED BY THE CONTRACT DOCUMENTS OR BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
18. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
19. CONTRACTOR SHALL APPLY SEEDING AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. THE SEEDING WORK SHALL CONFORM TO THE REQUIREMENTS OF SECTION 250 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION". THE APPLICATION OF LIMESTONE SHALL CONFORM TO THE PLANS OR AS DIRECTED BY THE ENGINEER. SAMPLE OF THE SEED APPLIED TO THE WORK SHALL BE APPROVED BY ENGINEER BEFORE THE WORK IS STARTED.
20. CONTRACTOR SHALL FURNISH, TRANSPORT AND PLACE MULCH OR EROSION CONTROL BLANKET OVER THE SEEDED AREA. THE METHOD, PROCEDURES AND MATERIALS APPLIED FOR MULCHING SHALL CONFORM TO THE REQUIREMENTS OF SECTION 251 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION". EROSION CONTROL BLANKET CAN REPLACE MULCHING AS METHOD FOR EROSION CONTROL. FOR GROUND SLOPES GREATER THAN 3:1 (H:V), EROSION CONTROL BLANKET SHALL BE USED FOR EROSION CONTROL.
21. EROSION CONTROL BLANKETS SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. MATERIALS OF THE BLANKET USING ONE OR MORE CATEGORIES OF FABRIC WILL BE DECIDED BY THE ENGINEER. THE MIXTURE OF FABRIC SHALL BE APPROVED BY THE ENGINEER. LIFE LASTING OF THE BLANKET SHALL MEET THE REQUIREMENT ON THE PLANS AND AS DIRECTED BY THE ENGINEER. SELECTED MATERIALS SHALL MEET MANUFACTURER'S SPECIFICATIONS FOR THE EROSION CONTROL BLANKET. THE BLANKET FOR TEMPORARY CONTROL APPLICATION SHALL MEET THE REQUIREMENT OF THE LIFE SPANNING OF THE CONTRACT TIME OR CAN BE DEGRADED AFTER STABLE VEGETATING SURFACE IS FORMED IN THE PLACE WHERE THE BLANKET IS USED. THE MATERIALS AND INSTALLATION METHODS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 251.04 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION". DETAILS OF INSTALLATION METHODS AND STAPLE PATTERN ARE SHOWN IN THE APPLICABLE DETAILS.
22. THE CONTRACTOR SHALL AT HIS EXPENSE CONSTRUCT AND MAINTAIN AT LEAST ONE (1) STABILIZED CONSTRUCTION ENTRANCE AS INDICATED ON THE EROSION CONTROL PLAN, THE NOTES AND DETAILS CONTAINED IN THESE PLANS, AND AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE. IF MUD, DIRT OR SEDIMENT BE TRACKED ON ADJACENT PAVEMENTS THE CONTRACTOR SHALL IMMEDIATELY CLEAN THE SOILS. SHOULD THE CONTRACTOR FAIL TO CLEAN UP THE OFF-SITE PAVEMENT, AND THE DIRT OR MUD REMAINS ON THE STREET. THE WORK MAY BE DONE BY THE CITY AND THE COST THEREOF SHALL BE CHARGED TO THE CONTRACTOR AND DEDUCT FROM HIS CONTRACT PRICE.
23. ALL SALVAGEABLE TEMPORARY EROSION CONTROL ITEMS SHALL BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR AT THE COMPLETION OF THE CONTRACT OR REQUIRED SERVICE.

DESIGNED:	CB/RM	REVISIONS
DRAFTED:	PE	
CHECKED:	CB/ELC/TBB	
FILE:	2612-51P1	

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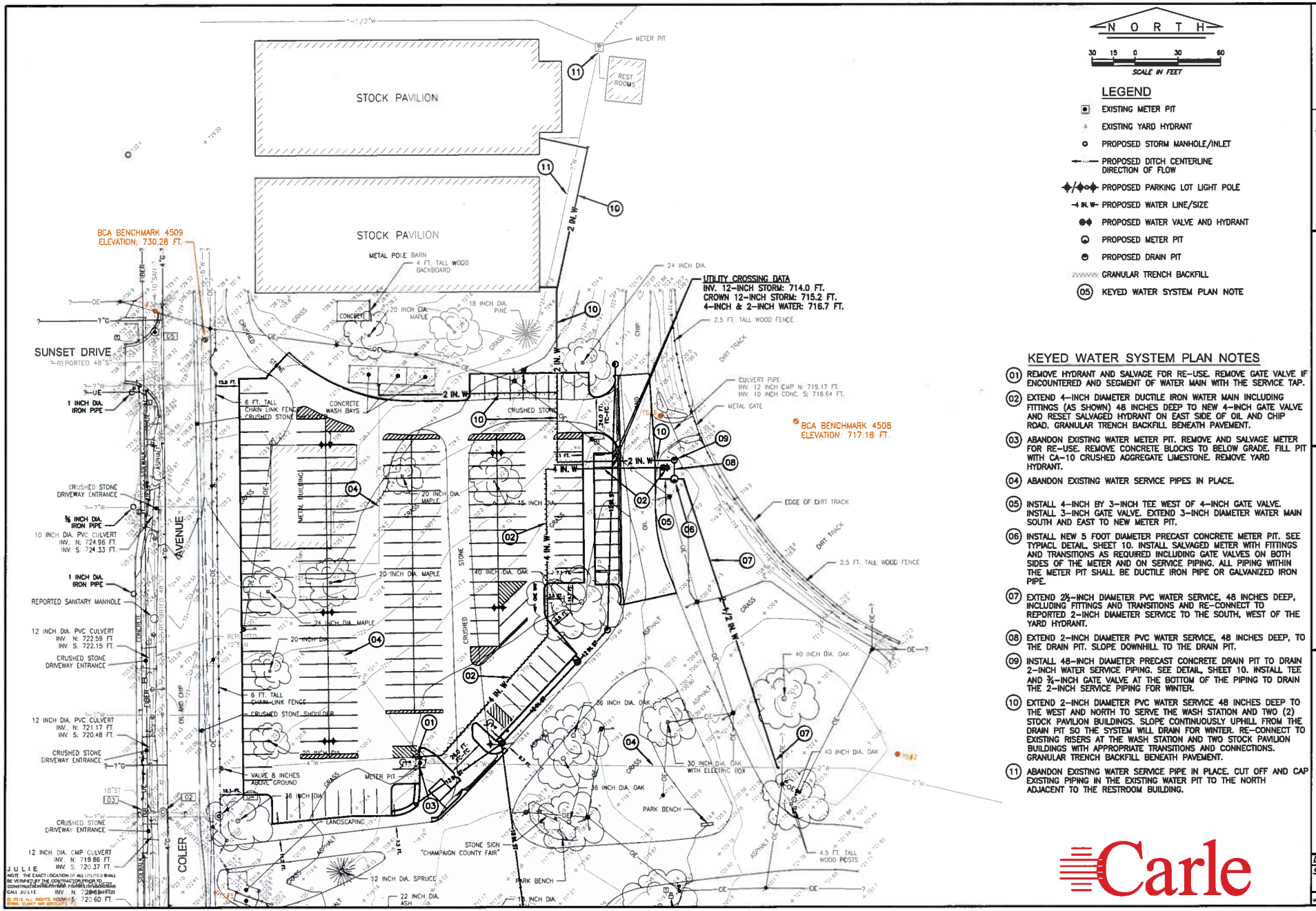
URBANA TOWNSHIP,
CHAMPAIGN COUNTY, ILLINOIS

EROSION CONTROL DETAILS AND NOTES

DATE: 050616
SHEET: 8 OF 27
JOB: 2612-51



N O R T H

30 15 0 30 60

SCALE IN FEET

LEGEND

- EXISTING METER PIT
- EXISTING YARD HYDRANT
- PROPOSED STORM MANHOLE/INLET
- PROPOSED DITCH CENTERLINE DIRECTION OF FLOW
- PROPOSED PARKING LOT LIGHT POLE
- 4 IN. W PROPOSED WATER LINE/SIZE
- PROPOSED WATER VALVE AND HYDRANT
- PROPOSED METER PIT
- PROPOSED DRAIN PIT
- GRANULAR TRENCH BACKFILL
- (05) KEYED WATER SYSTEM PLAN NOTE

KEYED WATER SYSTEM PLAN NOTES

(01) REMOVE HYDRANT AND SALVAGE FOR RE-USE. REMOVE GATE VALVE IF ENCOUNTERED AND SEGMENT OF WATER MAIN WITH THE SERVICE TAP.

(02) EXTEND 4-INCH DIAMETER DUCTILE IRON WATER MAIN INCLUDING FITTINGS (AS SHOWN) 48 INCHES DEEP TO NEW 4-INCH GATE VALVE AND RESET SALVAGED HYDRANT ON EAST SIDE OF OIL AND CHIP ROAD. GRANULAR TRENCH BACKFILL BENEATH PAVEMENT.

(03) ABANDON EXISTING WATER METER PIT. REMOVE AND SALVAGE METER FOR RE-USE. REMOVE CONCRETE BLOCKS TO BELOW GRADE. FILL PIT WITH CA-10 CRUSHED AGGREGATE LIMESTONE. REMOVE YARD HYDRANT.

(04) ABANDON EXISTING WATER SERVICE PIPES IN PLACE.

(05) INSTALL 4-INCH BY 3-INCH TEE WEST OF 4-INCH GATE VALVE. INSTALL 3-INCH GATE VALVE. EXTEND 3-INCH DIAMETER WATER MAIN SOUTH AND EAST TO NEW METER PIT.

(06) INSTALL NEW 5 FOOT DIAMETER PRECAST CONCRETE METER PIT. SEE TYPIACL DETAIL, SHEET 10. INSTALL SALVAGED METER WITH FITTINGS AND TRANSITIONS AS REQUIRED INCLUDING GATE VALVES ON BOTH SIDES OF THE METER AND ON SERVICE PIPING. ALL PIPING WITHIN THE METER PIT SHALL BE DUCTILE IRON PIPE OR GALVANIZED IRON PIPE.

(07) EXTEND 2½-INCH DIAMETER PVC WATER SERVICE, 48 INCHES DEEP, INCLUDING FITTINGS AND TRANSITIONS AND RE-CONNECT TO REPORTED 2-INCH DIAMETER SERVICE TO THE SOUTH, WEST OF THE YARD HYDRANT.

(08) EXTEND 2-INCH DIAMETER PVC WATER SERVICE, 48 INCHES DEEP, TO THE DRAIN PIT. SLOPE DOWNHILL TO THE DRAIN PIT.

(09) INSTALL 48-INCH DIAMETER PRECAST CONCRETE DRAIN PIT TO DRAIN 2-INCH WATER SERVICE PIPING. SEE DETAIL, SHEET 10. INSTALL TEE AND ¾-INCH GATE VALVE AT THE BOTTOM OF THE PIPING TO DRAIN THE 2-INCH SERVICE PIPING FOR WINTER.

(10) EXTEND 2-INCH DIAMETER PVC WATER SERVICE 48 INCHES DEEP TO THE WEST AND NORTH TO SERVE THE WASH STATION AND TWO (2) STOCK PAVILION BUILDINGS. SLOPE CONTINUOUSLY UPHILL FROM THE DRAIN PIT SO THE SYSTEM WILL DRAIN FOR WINTER. RE-CONNECT TO EXISTING RISERS AT THE WASH STATION AND TWO STOCK PAVILION BUILDINGS WITH APPROPRIATE TRANSITIONS AND CONNECTIONS. GRANULAR TRENCH BACKFILL BENEATH PAVEMENT.

(11) ABANDON EXISTING WATER SERVICE PIPE IN PLACE. CUT OFF AND CAP EXISTING PIPING IN THE EXISTING WATER PIT TO THE NORTH ADJACENT TO THE RESTROOM BUILDING.

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REVISIONS			
DESIGNED:	CB/RDM		
DRAFTED:	PE		
CHECKED:	CB/ELC/TBB		
FILE:	2612-51P1.DWG		

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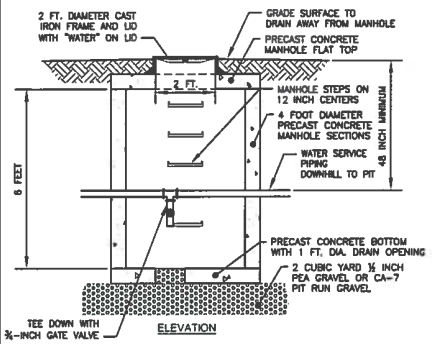
URBANA TOWNSHIP
CHAMPAIGN COUNTY, ILLINOIS

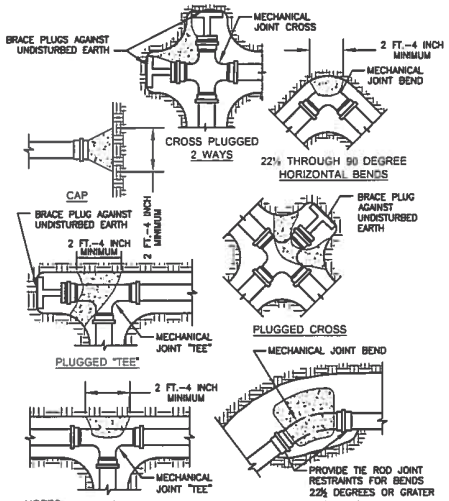
WATER SYSTEM PLAN

DATE: 050616
SHEET: 9 OF 27
JOB: 2612-51



DRAIN PIT DETAIL

NO SCALE



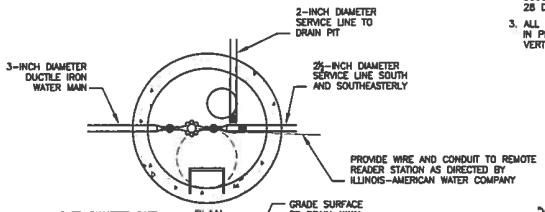
NOTES:

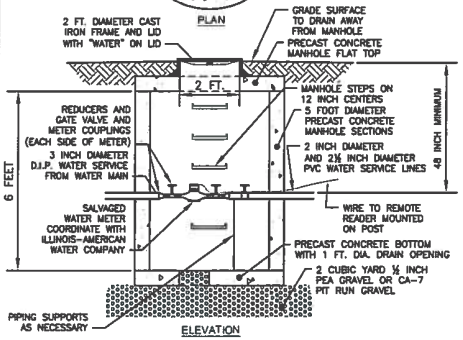
1. ALL BLOCKS BEAR AGAINST UNDISTURBED EARTH.
2. ALL BLOCKS TO BE 3000 PSI CONCRETE AT 28 DAYS.
3. ALL FITTINGS ARE SHOWN IN PLAN VIEW EXCEPT VERTICAL BEND.

	AREA OF BEARING FACE REQUIRED (SQ. FT.)		
PIPE SIZE	1/4 BEND	1/8 OR 1/16 BEND	TEES AND PLUGS
4-8 INCH	3 S.F.	3 S.F.	3 S.F.
10 INCH	4 S.F.	3 S.F.	3 S.F.
12 INCH	6 S.F.	3 S.F.	4 S.F.

THRUST BLOCK INSTALLATIONS

NO SCALE

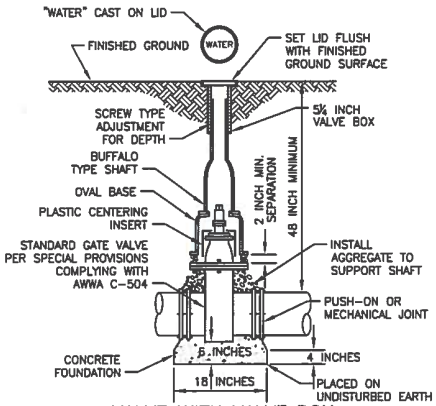




PIPE WITHIN METER PIT DOWNSTREAM OF WATER METER SHALL BE GALVANIZED PIPE AND SHALL TRANSITION TO PVC PIPE OUTSIDE OF THE METER PIT.

WATER METER MANHOLE (PIT)

NO SCALE



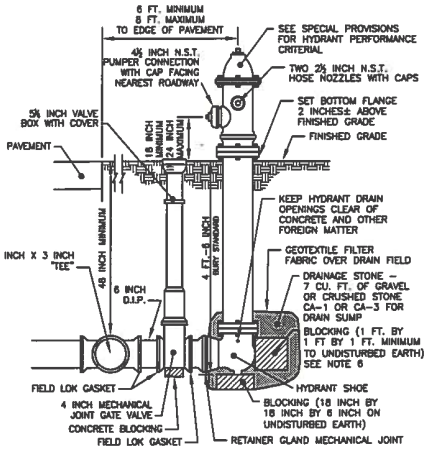
VALVE WITH VALVE BOX

(IAWC – EASTERN DIVISION)

NO SCALE

WATER SERVICE LINE NOTES

1. ALL WATER SERVICE LINE MATERIALS, CONSTRUCTION, STERILIZATION, AND TESTING SHALL CONFORM TO THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS", LATEST EDITION, SHALL COMPLY WITH THE PROVISIONS OF AWWA C600 AND AWWA C651, THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS, AND THE NOTES AND DETAILS CONTAINED IN THESE PLANS.
2. THE CONTRACTOR SHALL ABIDE BY ANY CONDITION(S) OF ACCEPTANCE IMPOSED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY OR THE MUNICIPAL AGENCY TO WHICH THE WATER SERVICE IS CONNECTED. NO WATER SERVICE SHALL BE PLACED INTO SERVICE UNTIL LABORATORY TESTS REVEAL THAT THE WATER SERVICE HAS BEEN PROPERLY STERILIZED.
3. ALL MATERIAL INCORPORATED INTO THE PROJECT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. DUCTILE IRON PIPE WATER SERVICES SHALL BE DUCTILE IRON PIPE THICKNESS CLASS 50, PRESSURE CLASS 350, CEMENT LINED INSIDE AND OUTSIDE COATED (ANSI A21.4 AWWA C151 AND C104), WITH RUBBER GASKETED PUSH ON JOINTS MEETING (ANSI A21.11 AWWA C111). WHERE INDICATED ON PLANS MECHANICAL JOINT (ANSI A2.11 AWWA C111) SHALL BE INSTALLED. PIPE SHALL BE NSF CERTIFIED.
5. DUCTILE IRON PIPE WATER SERVICES SHALL BE PROVIDED WITH POLYETHYLENE ENCASEMENT IN ACCORDANCE WITH AWWA C-105, METHOD A. POLYETHYLENE FILM SHALL BE A MINIMUM OF EIGHT (8) MIL (0.2 MM) THICKNESS.
6. FITTINGS FOR DUCTILE IRON PIPE SHALL BE PRESSURE CLASS 350 DUCTILE IRON CEMENT LINED INSIDE AND OUTSIDE COATED MECHANICAL JOINT STANDARD OR SHORT BODY (ANSI A21.53 AWWA C153). FITTINGS IN ACCORDANCE WITH THE ABOVE NOTED ANSI/AWWA REQUIREMENTS. RUBBER GASKETED PUSH ON "TITON" JOINTS MAY BE UTILIZED FOR FITTINGS. PROVIDE THRUST BLOCKING.
7. VALVES SHALL BE 200 PSI RATED IRON BODY RESILIENT SEAL GATE VALVES COMPLYING WITH AWWA C509 WITH EPOXY COATED INTERIOR SURFACES PER AWWA C-550 AND SHALL BE NSF CERTIFIED. GATE VALVES SHALL HAVE A 2 INCH OPERATING NUT, VERTICAL NON-RISING BRONZE STEM, AND SHALL OPEN BY TURNING COUNTER-CLOCKWISE.
8. VALVE BOXES SHALL BE 3/16 INCHES MINIMUM THICKNESS CAST IRON WITH 5¼ INCH DIAMETER MINIMUM SHAFT. PLASTIC CENTERING INSERTS SHALL BE PROVIDED FOR ALL VALVE BOXES.
9. COPPER SERVICE PIPES SHALL BE COPPER WATER TUBE, MINIMUM ¾ INCH, TYPE "K", SOFT TEMPER FOR UNDERGROUND SERVICE, CONFORMING TO ASTM B-88 AND B-251. THE PIPE SHALL BE MARKED WITH THE MANUFACTURER'S NAME OR TRADEMARK AND MARK INDICATIVE OF THE TYPE OF PIPE. THE OUTSIDE DIAMETER OF THE PIPE AND THE MINIMUM WEIGHT PER FOOT OF THE PIPE SHALL NOT BE LESS THAN THAT LISTED IN ASTM B-251, TABLE II.
10. PVC SERVICE PIPE SHALL BE POLYVINYL CHLORIDE OR CHLORINATED POLYVINYL CHLORIDE SDR 21 ASTM D-2741 AND BE RATED AT 200 P.S.I. MINIMUM. JOINTS SHALL BE ELASTOMERIC SEALS (GASKETS) FOR PUSH-ON JOINTS AND COMPLY WITH ASTM F477 AND PRESSURE RATED PER ASTM D3139. FITTINGS FOR PVC SERVICE PIPING SHALL BE MECHANICAL JOINT SHORT BODY DUCTILE IRON PIPE FITTINGS.
11. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING THE WATER SERVICES ACCORDING TO THE ALIGNMENTS AND GRADES SHOWN ON THE PLANS. SHOULD THE ALIGNMENT OR ELEVATION OF THE WATER SERVICES DEVIATE FROM THOSE SHOWN ON THE PLANS AS A RESULT OF INADEQUATE OR IMPROPER CONSTRUCTION TECHNIQUES ON THE PART OF THE CONTRACTOR, AND RESULT IN CONFLICTS WITH OTHER UTILITIES OR OBJECTS THAT WOULD OTHERWISE NOT BE ENCOUNTERED; THE CONTRACTOR WILL BE REQUIRED TO RECTIFY THOSE CONFLICTS AT HIS OWN EXPENSE.
12. THE REPRESENTATIVE OF THE ENGINEER OR OWNER MAY BE PRESENT DURING CONSTRUCTION ACTIVITIES. ALL WORK SHALL BE SUBJECT TO OBSERVATION BY THE ENGINEER OR THE OWNER'S REPRESENTATIVE.
13. THE CONTRACTOR SHALL RECORD ALL ACTUAL FIELD LOCATIONS FOR ALL SERVICE TAPS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH THE RECORDED SERVICE TAP LOCATIONS UPON COMPLETION OF CONSTRUCTION.
14. PIPE SHALL BE LAID WITH A MAXIMUM DEFLECTION ANGLE OF 3 DEGREES. ALL JOINTS SHALL BE PROPERLY LUBRICATED AND SEATED.
15. ALL PLUGS, CAPS, TEES, AND BENDS, AND FITTINGS DEFLECTING 22.5 DEGREES OR MORE ON SERVICES SHALL BE PROVIDED WITH A REACTION BACKING. THE REACTION BACKING SHOULD BE CONCRETE OF A MIX HAVING A COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 PSI AT 28 DAYS. BACKING SHALL BE PLACED BETWEEN SOLID GROUND AND THE FITTING TO BE ANCHORED, THE ANGLE OF BEARING ON THE PIPE AND ON THE GROUND IN EACH INSTANCE SHALL BE SHOWN ON THE PLANS.
16. ALL BOLTS, TIE RODS, CLAMPS AND OTHER METAL COMPONENTS SHALL BE PROVIDED WITH A HAND APPLICATION OF BITUMINOUS MASTIC MATERIAL.
17. MAINTAIN MINIMUM HORIZONTAL AND VERTICAL SEPARATION BETWEEN WATER SERVICES AND SEWERS AT ALL TIMES. MAINTAIN MINIMUM 10 FEET HORIZONTAL SEPARATION AND 18 INCH VERTICAL SEPARATION PER SECTION 41-2.01 AND STANDARD DRAWINGS 18 THROUGH 24 OF THE STANDARD SPECIFICATIONS. UTILIZE SECONDARY CASING WHEN REQUIRED FOR COMPLIANCE WITH SEPARATION REQUIREMENTS.
18. MINIMUM COVER SHALL BE 48 INCHES FOR SERVICES UNLESS NOTED OTHERWISE ON PLANS.
19. DISPOSE OF ALL EXCESS EXCAVATED MATERIAL OFF-SITE, OR AT THE SITE AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
20. BEDDING, HAUNCHING, INITIAL BACKFILL AND FINAL BACKFILL SHALL BE IN ACCORDANCE WITH THE STANDARD DETAILS, THE DETAILS IN THESE PLANS, AND SECTIONS 20-2.20 AND 20-2.21 OF THE STANDARD SPECIFICATIONS.
21. ALL WATER SERVICE TRENCHES UNDER PAVED SURFACES SHALL RECEIVE COMPACTED SELECTED GRANULAR MATERIAL FOR TRENCH BACKFILL OR CONTROLLED LOW STRENGTH FLOWABLE FILL MATERIAL (BACKFILL METHOD 1 OR METHOD 3).
22. WATER MAINS SHALL BE PRESSURE TESTED FOR NOT LESS THAN 2 HOURS, AND LEAKAGE TESTED FOR NOT LESS THAN 1 HOUR. MINIMUM TEST PRESSURE SHALL BE 100 PSI. TESTING SHALL BE INCIDENTAL TO WATER MAIN CONSTRUCTION AND SHALL BE OBSERVED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
23. NO PAYMENT WILL BE MADE FOR INSTALLATION OF WATER SERVICES UNTIL ALL TRENCH BACKFILL HAS BEEN COMPACTED.
24. CONTRACTOR SHALL INCLUDE ALL NECESSARY HYDRANT AND VALVE EXTENSIONS REQUIRED TO MATCH EXISTING GROUND SURFACE.



NOTES:

1. FIRE HYDRANTS SHALL BE DRY BARREL, STANDARD COMPRESSION, TWO TWO PIECE STANDPIPE WITH BREAK AWAY DESIGN.
2. FIRE HYDRANTS SHALL BE INSTALLED PLUMB.
3. HYDRANT SHALL CONFORM TO AWWA STANDARD C-502 AND SHALL HAVE A 4½ INCH INTERNAL VALVE AND TWO 2½ INCH NST HOSE NOZZLES.
4. CONCRETE BASE AND BLOCKING MATERIAL SHALL NOT BLOCK OR OBSTRUCT HYDRANT DRAIN.
5. FIRE HYDRANT SHALL BE LOCATED BETWEEN SIDEWALK AND CURB IF POSSIBLE.
6. CONCRETE BLOCKING SHALL BE ACCEPTABLE FOR PUSH ON PIPE IN LIEU OF FIELD LOK GASKETS IN ACCORDANCE WITH SPECIFICATION SECTION 15108 – DUCTILE IRON PIPE AND FITTINGS, PART 3.01.
7. FOR THIS PROJECT A STANDARD HYDRANT ASSEMBLY SHALL CONSIST OF A HYDRANT HAVING A FLANGE INLET CONNECTION MATCHING A RESILIENT WEDGE VALVE WITH MECHANICAL JOINT AND FLANGE ENDS; SIZE AS NOTED ON PLANS.

FIRE HYDRANT INSTALLATION

(NEW VALVE – RE-USE EXISTING HYDRANT)

NO SCALE

J.U.L.I.E.
NOTE: THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES. FOR UTILITY LOCATIONS CALL J.U.L.I.E. (800) 892-0123

		REVISIONS	
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FILE:	2612-51P1		

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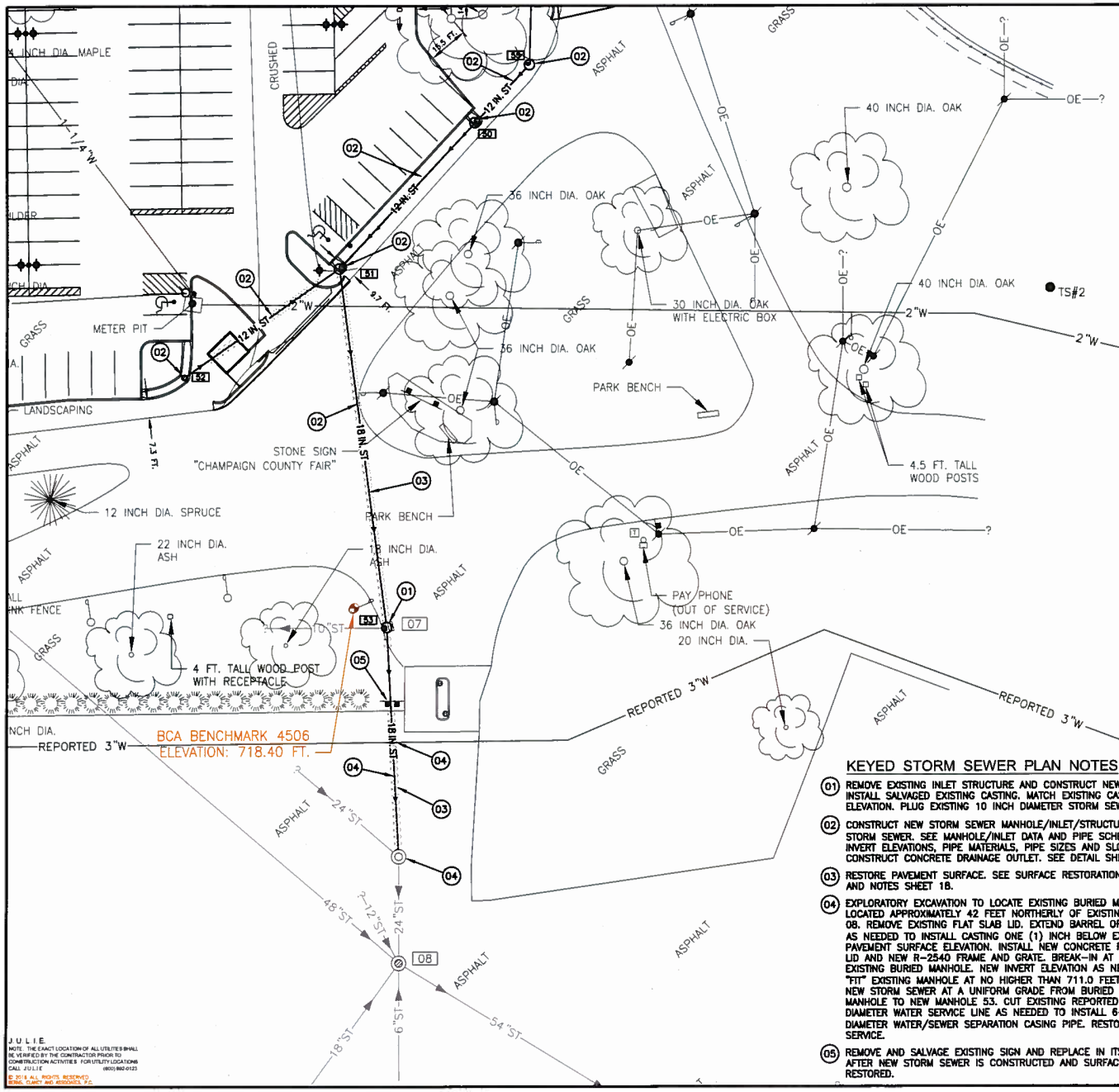
URBANA TOWNSHIP, CHAMPAIGN COUNTY, ILLINOIS

WATER SYSTEM DETAILS AND NOTES

DATE: 050616
SHEET: 10 OF 27
JOB: 2612-51


N O R T H
20 10 0 20 40
SCALE IN FEET
LEGEND
PROPOSED STORM MANHOLE/INLET
50 PROPOSED STORM MANHOLE/INLET DESIGNATION
-8 IN. ST- PROPOSED STORM SEWER LINE/SIZE
GRANULAR TRENCH BACKFILL (CA-10 CRUSHED AGGREGATE LIMESTONE)
PROPOSED DITCH CENTERLINE DIRECTION OF FLOW
PROPOSED PARKING LOT LIGHT POLE
05 KEYED UTILITY PLAN NOTE
PROPOSED MANHOLE / INLET DATA
EXISTING STORM INLET 07 (NO CURB)
FLOWLINE ELEVATION: 715.74 FT.
TO BE REMOVED–
CASTING TO BE SALVAGED
INV. 10 INCH HDPE W: 714.34 FT.
TO BE PLUGGED
EXISTING STORM MANHOLE 08
RIM ELEVATION: 715.75 FT.
INV. 6 INCH VCP S: 713.30 FT.
INV. 12 INCH CONC. NW: 710.07 FT.
INV. 18 INCH CONC. SW: 710.12 FT.
INV. 24 INCH CONC. N: 709.96 FT.
INV. 48 INCH CONC. NW: 703.53 FT.
INV. 54 INCH CONC. SE: 703.10 FT.
INV. NEW 18 INCH CONC. NE: 711.0 FT.
STORM MANHOLE 11
RIM ELEVATION: 704.51 FT.
EXISTING CASTING REMOVED AND REPLACED WITH NEW R-4342 CASTING
NEW RIM ELEVATION: 706.8 FT.
INV. 15 INCH CONC. E: 702.00 FT.
STORM MANHOLE 12
RIM ELEVATION: 705.74 FT.
INV. 12 INCH CONC. E: 702.15 FT.
INV. 15 INCH CONC. N: 703.33 FT.
INV. 18 INC CONC. SW: 700.73 FT.
INV. 54 INCH CONC. NW: 698.54 FT.
INV. 54 INCH CONC. SE: 698.64 FT.
INV. NEW 12 INCH CONC. SW: 700.5 FT.
PROPOSED STORM MANHOLE 50
48 INCH DIAMETER PRECAST CONCRETE WITH R-2548 FRAME AND OPEN GRATE
RIM ELEVATION: 717.75 FT.
INV. 12 INCH CONC. NE: 712.60 FT.
INV. 12 INCH CONC. SW: 712.50 FT.
PROPOSED STORM MANHOLE 51
48 INCH DIAMETER PRECAST CONCRETE WITH R-2548 FRAME AND OPEN GRATE
RIM ELEVATION: 717.50 FT.
INV. 12 INCH CONC. SW: 715.00 FT.
INV. 12 INCH CONC. NE: 712.50 FT.
INV. 18 INCH CONC. S: 712.25 FT.
PROPOSED STORM INLET 52
24 INCH DIAMETER PRECAST CONCRETE WITH R-2548 FRAME AND OPEN GRATE
RIM ELEVATION: 718.00 FT.
INV. 12 INCH CONC. NE: 715.75 FT.
PROPOSED STORM MANHOLE 53
(FORMER EXISTING STORM INLET 07)
48 INCH DIAMETER PRECAST CONCRETE WITH SALVAGED CASTING FROM EXISTING INLET 07
RIM ELEVATION: 715.74 FT.
INV. 18 INCH CONC. N: 711.55 FT.
INV. 18 INCH CONC. S: 711.45 FT.
PROPOSED STORM INLET 54
24 INCH DIAMETER PRECAST CONCRETE WITH NEENAH R-4340-B CASTING
RIM ELEVATION: 704.0 FT.
INV. 12 INCH CONC. NE: 701.5 FT.
(SEE SHEET 13)
PROPOSED STORM MANHOLE 55
48 INCH DIAMETER PRECAST CONCRETE WITH R-2548 FRAME AND OPEN GRATE
RIM ELEVATION: 719.30 FT.
INV. 12 INCH CONC. N: 712.90 FT.
INV. 12 INCH CONC. SW: 712.80 FT.
PROPOSED STORM MANHOLE 56
48 INCH DIAMETER PRECAST CONCRETE WITH R-2548 FRAME AND OPEN GRATE
RIM ELEVATION: 721.00 FT.
INV. 12 INCH CONC. S: 714.65 FT.
KEYED STORM SEWER PLAN NOTES
01 REMOVE EXISTING INLET STRUCTURE AND CONSTRUCT NEW MANHOLE. INSTALL SALVAGED EXISTING CASTING. MATCH EXISTING CASTING ELEVATION. PLUG EXISTING 10 INCH DIAMETER STORM SEWER WEST.
02 CONSTRUCT NEW STORM SEWER MANHOLE/INLET/STRUCTURE AND NEW STORM SEWER. SEE MANHOLE/INLET DATA AND PIPE SCHEDULE FOR INVERT ELEVATIONS, PIPE MATERIALS, PIPE SIZES AND SLOPES. CONSTRUCT CONCRETE DRAINAGE OUTLET. SEE DETAIL SHEET 15.
03 RESTORE PAVEMENT SURFACE. SEE SURFACE RESTORATION DETAILS AND NOTES SHEET 18.
04 EXPLORATORY EXCAVATION TO LOCATE EXISTING BURIED MANHOLE LOCATED APPROXIMATELY 42 FEET NORTHERLY OF EXISTING MANHOLE 08. REMOVE EXISTING FLAT SLAB LID. EXTEND BARREL OF MANHOLE AS NEEDED TO INSTALL CASTING ONE (1) INCH BELOW EXISTING PAVEMENT SURFACE ELEVATION. INSTALL NEW CONCRETE FLAT SLAB LID AND NEW R-2540 FRAME AND GRATE. BREAK-IN AT NEAREST EXISTING BURIED MANHOLE. NEW INVERT ELEVATION AS NEEDED TO "FIT" EXISTING MANHOLE AT NO HIGHER THAN 711.0 FEET. INSTALL NEW STORM SEWER AT A UNIFORM GRADE FROM BURIED EXISTING MANHOLE TO NEW MANHOLE 53. CUT EXISTING REPORTED 3-INCH DIAMETER WATER SERVICE LINE AS NEEDED TO INSTALL 6-INCH DIAMETER WATER/SEWER SEPARATION CASING PIPE. RESTORE WATER SERVICE.
05 REMOVE AND SALVAGE EXISTING SIGN AND REPLACE IN ITS LOCATION AFTER NEW STORM SEWER IS CONSTRUCTED AND SURFACE IS RESTORED.
PROPOSED STORM SEWER PIPE SCHEDULE
DOWNSTREAM STRUCTURE | UPSTREAM STRUCTURE | LENGTH (FEET) | SLOPE (PERCENT) | DIAMETER | PIPE MATERIAL
53 | 51 | 141 | 0.5 | 18 INCHES | CONCRETE
51 | 50 | 77 | 0.5 | 12 INCHES | CONCRETE
51 | 52 | 74 | 1.0 | 12 INCHES | CONCRETE
EXT. MH. | 53 | 90 | 0.5 | 18 INCHES | CONCRETE
12 | 54 | 169 | 0.6 | 12 INCHES | CONCRETE
50 | 55 | 40 | 0.5 | 12 INCHES | CONCRETE
55 | 56 | 176 | 1.0 | 12 INCHES | CONCRETE
* – SEE STORMWATER MANAGEMENT PLAN SHEET 13
# – SEE STORM SEWER PLAN SHEET 12
Carle
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CHECKED: CB/ELC/TBB
FILE: 2612-51P1.DWG
CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP, CHAMPAIGN COUNTY, ILLINOIS
STORM SEWER PLAN
DATE: 050616
SHEET: 11 OF 27
JOB: 2612-51
BCA BENCHMARK 4506
ELEVATION: 718.40 FT.
METER PIT
LANDSCAPING
STONE SIGN "CHAMPAIGN COUNTY FAIR"
4 FT. TALL WOOD POST WITH RECEPTACLE
4.5 FT. TALL WOOD POSTS
PARK BENCH
PAY PHONE (OUT OF SERVICE)
TS#2
30 INCH DIA. OAK WITH ELECTRIC BOX
36 INCH DIA. OAK
40 INCH DIA. OAK
12 INCH DIA. SPRUCE
22 INCH DIA. ASH
18 INCH DIA. ASH
20 INCH DIA.
REPORTED 3"W
2"W
GRASS
ASPHALT
CRUSHED
OE
24"ST
48"ST
54"ST
18"ST
6"ST
12"ST
J.U.L.I.E.
NOTE: THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES FOR UTILITY LOCATIONS CALL J.U.L.I.E. (800) 892-0123
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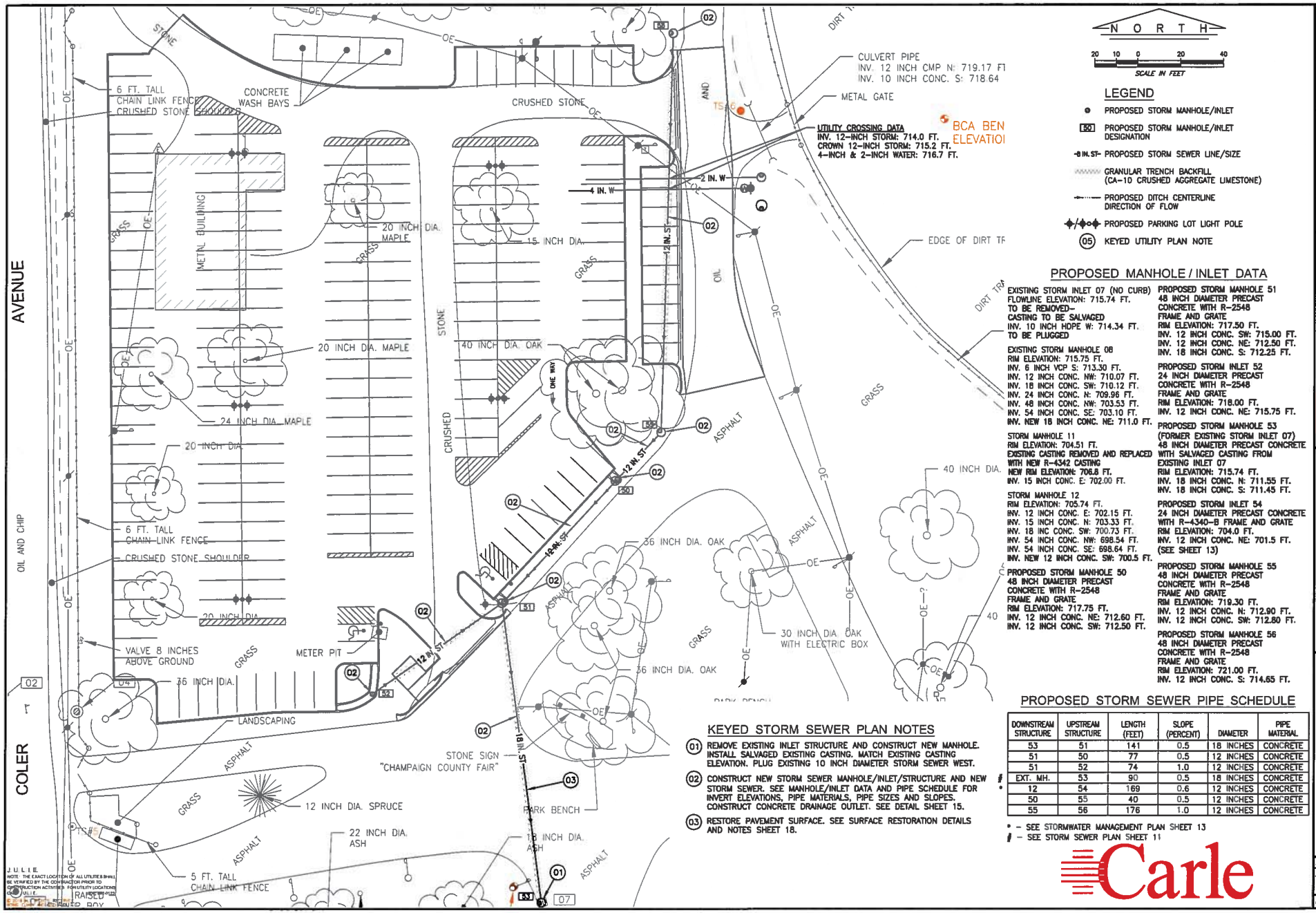

PROPOSED MANHOLE / INLET DATA

EXISTING STORM INLET 07 (NO CURB)
FLOWLINE ELEVATION: 715.74 FT.
TO BE REMOVED–
CASTING TO BE SALVAGED
INV. 10 INCH HDPE W: 714.34 FT.
TO BE PLUGGED

EXISTING STORM MANHOLE 08
RIM ELEVATION: 715.75 FT.
INV. 6 INCH VCP S: 713.30 FT.
INV. 12 INCH CONC. NW: 710.07 FT.
INV. 18 INCH CONC. SW: 710.12 FT.
INV. 24 INCH CONC. N: 709.96 FT.
INV. 48 INCH CONC. NW: 703.53 FT.
INV. 54 INCH CONC. SE: 703.10 FT.
INV. NEW 18 INCH CONC. NE: 711.0 FT.

STORM MANHOLE 11
RIM ELEVATION: 704.51 FT.
EXISTING CASTING REMOVED AND REPLACED WITH NEW R-4342 CASTING
NEW RIM ELEVATION: 706.8 FT.
INV. 15 INCH CONC. E: 702.00 FT.

STORM MANHOLE 12
RIM ELEVATION: 705.74 FT.
INV. 12 INCH CONC. E: 702.15 FT.
INV. 15 INCH CONC. N: 703.33 FT.
INV. 18 INC CONC. SW: 700.73 FT.
INV. 54 INCH CONC. NW: 698.54 FT.
INV. 54 INCH CONC. SE: 698.64 FT.
INV. NEW 12 INCH CONC. SW: 700.5 FT.

PROPOSED STORM MANHOLE 50
48 INCH DIAMETER PRECAST CONCRETE WITH R-2548 FRAME AND GRATE
RIM ELEVATION: 717.75 FT.
INV. 12 INCH CONC. NE: 712.60 FT.
INV. 12 INCH CONC. SW: 712.50 FT.

PROPOSED STORM MANHOLE 51
48 INCH DIAMETER PRECAST CONCRETE WITH R-2548 FRAME AND GRATE
RIM ELEVATION: 717.50 FT.
INV. 12 INCH CONC. SW: 715.00 FT.
INV. 12 INCH CONC. NE: 712.50 FT.
INV. 18 INCH CONC. S: 712.25 FT.

PROPOSED STORM INLET 52
24 INCH DIAMETER PRECAST CONCRETE WITH R-2548 FRAME AND GRATE
RIM ELEVATION: 718.00 FT.
INV. 12 INCH CONC. NE: 715.75 FT.

PROPOSED STORM MANHOLE 53
(FORMER EXISTING STORM INLET 07)
48 INCH DIAMETER PRECAST CONCRETE WITH SALVAGED CASTING FROM EXISTING INLET 07
RIM ELEVATION: 715.74 FT.
INV. 18 INCH CONC. N: 711.55 FT.
INV. 18 INCH CONC. S: 711.45 FT.

PROPOSED STORM INLET 54
24 INCH DIAMETER PRECAST CONCRETE WITH R-4340-B FRAME AND GRATE
RIM ELEVATION: 704.0 FT.
INV. 12 INCH CONC. NE: 701.5 FT.
(SEE SHEET 13)

PROPOSED STORM MANHOLE 55
48 INCH DIAMETER PRECAST CONCRETE WITH R-2548 FRAME AND GRATE
RIM ELEVATION: 719.30 FT.
INV. 12 INCH CONC. N: 712.90 FT.
INV. 12 INCH CONC. SW: 712.80 FT.

PROPOSED STORM MANHOLE 56
48 INCH DIAMETER PRECAST CONCRETE WITH R-2548 FRAME AND GRATE
RIM ELEVATION: 721.00 FT.
INV. 12 INCH CONC. S: 714.65 FT.

KEYED STORM SEWER PLAN NOTES

(01) REMOVE EXISTING INLET STRUCTURE AND CONSTRUCT NEW MANHOLE. INSTALL SALVAGED EXISTING CASTING. MATCH EXISTING CASTING ELEVATION. PLUG EXISTING 10 INCH DIAMETER STORM SEWER WEST.

(02) CONSTRUCT NEW STORM SEWER MANHOLE/INLET/STRUCTURE AND NEW STORM SEWER. SEE MANHOLE/INLET DATA AND PIPE SCHEDULE FOR INVERT ELEVATIONS, PIPE MATERIALS, PIPE SIZES AND SLOPES. CONSTRUCT CONCRETE DRAINAGE OUTLET. SEE DETAIL SHEET 15.

(03) RESTORE PAVEMENT SURFACE. SEE SURFACE RESTORATION DETAILS AND NOTES SHEET 18.

PROPOSED STORM SEWER PIPE SCHEDULE

DOWNSTREAM STRUCTURE	UPSTREAM STRUCTURE	LENGTH (FEET)	SLOPE (PERCENT)	DIAMETER	PIPE MATERIAL
53	51	141	0.5	18 INCHES	CONCRETE
51	50	77	0.5	12 INCHES	CONCRETE
51	52	74	1.0	12 INCHES	CONCRETE
EXT. MH.	53	90	0.5	18 INCHES	CONCRETE
12	54	169	0.6	12 INCHES	CONCRETE
50	55	40	0.5	12 INCHES	CONCRETE
55	56	176	1.0	12 INCHES	CONCRETE

* – SEE STORMWATER MANAGEMENT PLAN SHEET 13
# – SEE STORM SEWER PLAN SHEET 11

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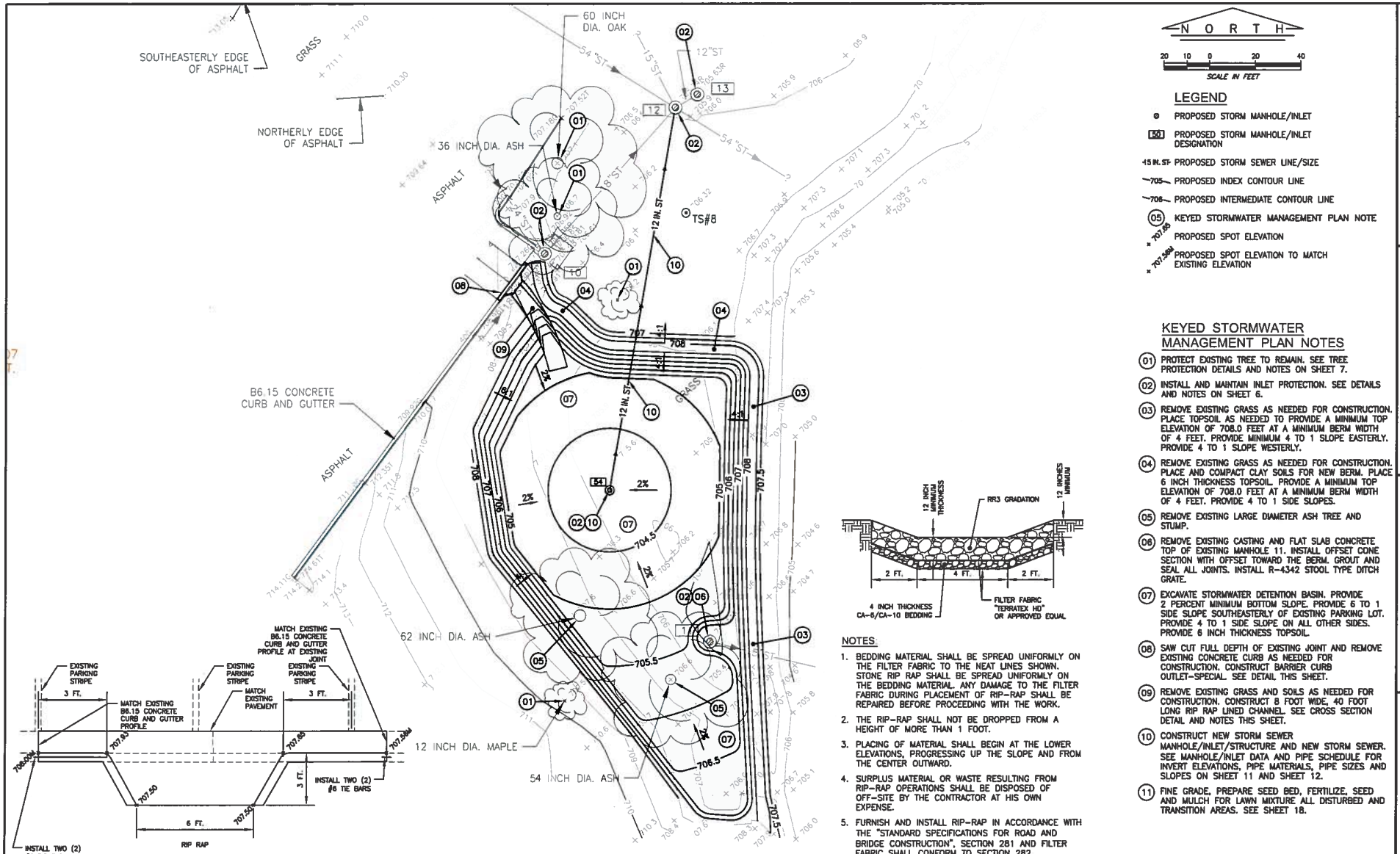
CHAMPAIGN COUNTY, ILLINOIS

STORM SEWER PLAN

DATE: 050616
SHEET: 12 OF 27
JOB: 2612-51



BARRIER CURB OUTLET - SPECIAL
NO SCALE

NOTES:

1. BEDDING MATERIAL SHALL BE SPREAD UNIFORMLY ON THE FILTER FABRIC TO THE NEAT LINES SHOWN. STONE RIP RAP SHALL BE SPREAD UNIFORMLY ON THE BEDDING MATERIAL. ANY DAMAGE TO THE FILTER FABRIC DURING PLACEMENT OF RIP-RAP SHALL BE REPAIRED BEFORE PROCEEDING WITH THE WORK.
2. THE RIP-RAP SHALL NOT BE DROPPED FROM A HEIGHT OF MORE THAN 1 FOOT.
3. PLACING OF MATERIAL SHALL BEGIN AT THE LOWER ELEVATIONS, PROGRESSING UP THE SLOPE AND FROM THE CENTER OUTWARD.
4. SURPLUS MATERIAL OR WASTE RESULTING FROM RIP-RAP OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE.
5. FURNISH AND INSTALL RIP-RAP IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", SECTION 281 AND FILTER FABRIC SHALL CONFORM TO SECTION 282.

CROSS - SECTION
RIP RAP LINED CHANNEL
NO SCALE

N O R T H
20 10 0 20 40
SCALE IN FEET

LEGEND

- PROPOSED STORM MANHOLE/INLET
- [50] PROPOSED STORM MANHOLE/INLET DESIGNATION
- 15 IN. ST PROPOSED STORM SEWER LINE/SIZE
- 705 PROPOSED INDEX CONTOUR LINE
- 706 PROPOSED INTERMEDIATE CONTOUR LINE
- (05) KEYED STORMWATER MANAGEMENT PLAN NOTE
- 707.85 PROPOSED SPOT ELEVATION
- 707.50M PROPOSED SPOT ELEVATION TO MATCH EXISTING ELEVATION

KEYED STORMWATER MANAGEMENT PLAN NOTES

(01) PROTECT EXISTING TREE TO REMAIN. SEE TREE PROTECTION DETAILS AND NOTES ON SHEET 7.

(02) INSTALL AND MAINTAIN INLET PROTECTION. SEE DETAILS AND NOTES ON SHEET 6.

(03) REMOVE EXISTING GRASS AS NEEDED FOR CONSTRUCTION. PLACE TOPSOIL AS NEEDED TO PROVIDE A MINIMUM TOP ELEVATION OF 708.0 FEET AT A MINIMUM BERM WIDTH OF 4 FEET. PROVIDE MINIMUM 4 TO 1 SLOPE EASTERLY. PROVIDE 4 TO 1 SLOPE WESTERLY.

(04) REMOVE EXISTING GRASS AS NEEDED FOR CONSTRUCTION. PLACE AND COMPACT CLAY SOILS FOR NEW BERM. PLACE 6 INCH THICKNESS TOPSOIL. PROVIDE A MINIMUM TOP ELEVATION OF 708.0 FEET AT A MINIMUM BERM WIDTH OF 4 FEET. PROVIDE 4 TO 1 SIDE SLOPES.

(05) REMOVE EXISTING LARGE DIAMETER ASH TREE AND STUMP.

(06) REMOVE EXISTING CASTING AND FLAT SLAB CONCRETE TOP OF EXISTING MANHOLE 11. INSTALL OFFSET CONE SECTION WITH OFFSET TOWARD THE BERM. GROUT AND SEAL ALL JOINTS. INSTALL R-4342 STOOL TYPE DITCH GRATE.

(07) EXCAVATE STORMWATER DETENTION BASIN. PROVIDE 2 PERCENT MINIMUM BOTTOM SLOPE. PROVIDE 6 TO 1 SIDE SLOPE SOUTHEASTERLY OF EXISTING PARKING LOT. PROVIDE 4 TO 1 SIDE SLOPE ON ALL OTHER SIDES. PROVIDE 6 INCH THICKNESS TOPSOIL.

(08) SAW CUT FULL DEPTH OF EXISTING JOINT AND REMOVE EXISTING CONCRETE CURB AS NEEDED FOR CONSTRUCTION. CONSTRUCT BARRIER CURB OUTLET-SPECIAL. SEE DETAIL THIS SHEET.

(09) REMOVE EXISTING GRASS AND SOILS AS NEEDED FOR CONSTRUCTION. CONSTRUCT 8 FOOT WIDE, 40 FOOT LONG RIP RAP LINED CHANNEL. SEE CROSS SECTION DETAIL AND NOTES THIS SHEET.

(10) CONSTRUCT NEW STORM SEWER MANHOLE/INLET/STRUCTURE AND NEW STORM SEWER. SEE MANHOLE/INLET DATA AND PIPE SCHEDULE FOR INVERT ELEVATIONS, PIPE MATERIALS, PIPE SIZES AND SLOPES ON SHEET 11 AND SHEET 12.

(11) FINE GRADE, PREPARE SEED BED, FERTILIZE, SEED AND MULCH FOR LAWN MIXTURE ALL DISTURBED AND TRANSITION AREAS. SEE SHEET 18.

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REVISIONS

DESIGNED: CB/ROM
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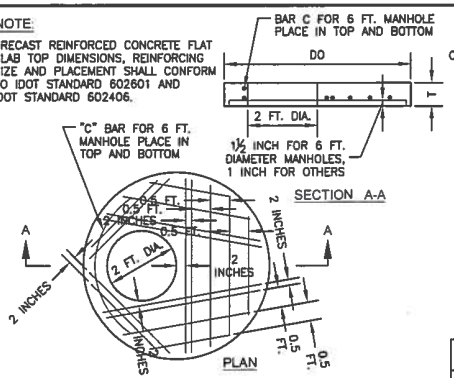
CHAMPAIGN COUNTY, ILLINOIS

STORMWATER MANAGEMENT PLAN

DATE: 050616
SHEET: 13 OF 27
JOB: 2612-51

NOTE:

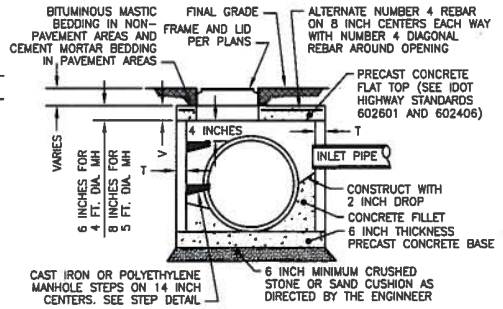
PRECAST REINFORCED CONCRETE FLAT SLAB TOP DIMENSIONS, REINFORCING SIZE AND PLACEMENT SHALL CONFORM TO IDOT STANDARD 602601 AND IDOT STANDARD 602406.



D	DO DO (MIN)	T	BAR SIZE	BAR LENGTH	C RADIUS
3 FT.	D+2T	6	NO. 4	4 FT.	19 INCHES
4 FT.	D+2T	6	NO. 5	4.5 FT.	26 INCHES
5 FT.	D+2T	8	NO. 5	5 FT.	32 INCHES
6 FT.	D+2T	8	NO. 6	6 FT.	38 INCHES

PRECAST CONCRETE FLAT TOP SECTION

NO SCALE



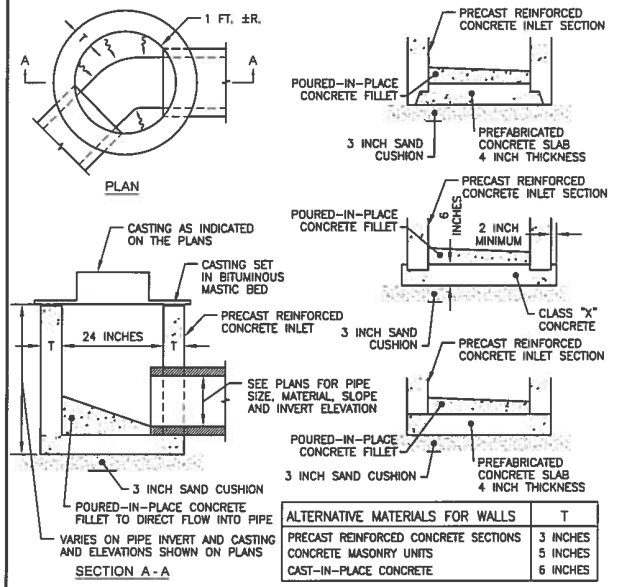
ALTERNATE MATERIALS FOR STRUCTURE WALLS

	3 FT. INLET D = 3 FT.	4 FT. MANHOLE D = 4 FT.	5 FT. MANHOLE D = 5 FT.	6 FT. MANHOLE D = 6 FT.
PRECAST REINFORCED CONCRETE UNITS	T = 3 INCHES	T = 4 INCHES	T = 5 INCHES	T = 6 INCHES
CONCRETE MASONRY UNITS	T = 5 INCHES	T = 5 INCHES	T = 5 INCHES	T = 6 INCHES
CAST-IN-PLACE CONCRETE	T = 6 INCHES	T = 6 INCHES	T = 6 INCHES	T = 6 INCHES

STORM SEWER MANHOLE

(USE WHEN "V" IS LESS THAN 5 FEET)

NO SCALE



ALTERNATIVE MATERIALS FOR WALLS	T
PRECAST REINFORCED CONCRETE SECTIONS	3 INCHES
CONCRETE MASONRY UNITS	5 INCHES
CAST-IN-PLACE CONCRETE	6 INCHES

NOTES:

1) ALL REQUIRED EXCAVATION SHALL BE INCLUDED IN THE CONTRACT FOR 24 INCH DIAMETER INLET.
2) FURNISHING AND INSTALLING SAND CUSHION SHALL BE INCLUDED IN THE CONTRACT FOR 24 INCH DIAMETER INLET.
3) BACKFILL IN NON-PAVEMENT AREAS SHALL BE EXCAVATED MATERIAL. BACKFILL IN PAVEMENT AREAS SHALL BE GRANULAR TRENCH BACKFILL MATERIAL OR CONTROLLED LOW STRENGTH FLOWABLE FILL MATERIAL. THE BACKFILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
4) BACKFILLING AND REMOVAL OF SURPLUS EXCAVATED MATERIAL SHALL BE INCLUDED IN THE CONTRACT FOR 24 INCH DIAMETER INLET.
5) THE CASTING OR FRAME AND GRATE SHALL BE AS SPECIFIED ON THE PLANS AND SHALL BE INCLUDED IN THE CONTRACT FOR 24 INCH DIAMETER INLET.
6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE VERTICAL DIMENSION OF THE PRECAST REINFORCED CONCRETE INLET SECTION BASED ON PIPE INVERT AND CASTING ELEVATION GIVEN ON THE PLANS.
7) ONLY PRECAST REINFORCED CONCRETE SECTIONS SHALL BE USED UNLESS PRIOR APPROVAL IS OBTAINED FROM THE ENGINEER.
8) THE OUTSIDE OF INLETS CONSTRUCTED OF CONCRETE MASONRY UNITS SHALL BE SEALED WITH A BITUMINOUS WATERPROOF MATERIAL.
9) INLETS SHALL COMPLY WITH THE APPLICABLE PORTIONS OF I.D.O.T. HIGHWAY STANDARD 602301 AND THE APPLICABLE PROVISIONS OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

STANDARD DETAIL FOR 24 INCH DIAMETER INLET TYPE "A" MODIFIED

NO SCALE

STORM SEWER NOTES

1. STORM SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 550 OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION, THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISION, LATEST EDITION, THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS, AND THE NOTES AND DETAILS CONTAINED IN THESE PLANS.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING THE SEWER ACCORDING TO THE ALIGNMENT AND GRADES SHOWN ON THE PLANS. SHOULD THE ALIGNMENT OR ELEVATION OF THE SEWER DEVIATE FROM THOSE SHOWN ON THE PLANS AS A RESULT OF INADEQUATE OR IMPROPER CONSTRUCTION TECHNIQUES ON THE PART OF THE CONTRACTOR, AND RESULT IN CONFLICTS WITH OTHER UTILITIES OR OBJECTS THAT WOULD OTHERWISE NOT BE ENCOUNTERED, THE CONTRACTOR WILL BE REQUIRED TO RECTIFY THOSE CONFLICTS AT HIS OWN EXPENSE. ENGINEER OR OWNER'S REPRESENTATIVE WILL PROVIDE RANDOM CHECKS TO ASSIST CONTRACTOR. NO CHANGES WILL BE ALLOWED UNLESS APPROVED BY THE ENGINEER. DISPOSE OF ALL EXCESS EXCAVATED MATERIAL OFF-SITE OR AT THE SITE AS DIRECTED BY THE ENGINERR OR OWNER'S REPRESENTATIVE.
3. LIMITS OF CONSTRUCTION ARE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
4. PIPE MATERIALS FOR STORM SEWERS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76 OR CONCRETE SEWER PIPE CONFORMING TO ASTM C-14 FOR SIZES SMALLER THAN 12 INCH DIAMETER.
   OR
   EXTRA STRENGTH VITRIFIED CLAY PIPE IN ACCORDANCE WITH ASTM C-700
   OR
   POLYVINYL CHLORIDE PIPE (PVC) IN ACCORDANCE WITH ASTM D-3034, TYPE PSM, WITH A MINIMUM WALL THICKNESS STANDARD DIMENSION RATIO (SDR) OF 26 (HEAVY WALL PIPE)

   PVC STORM SEWER PIPE MAY ONLY BE UTILIZED FOR STORM SEWERS 18 INCHES IN DIAMETER OR SMALLER.
5. PVC STORM SEWER PIPE SHALL NOT BE USED UNLESS PIPE COVER EXCEEDS 30 INCHES OR CONCRETE ENCASEMENT PROTECTION IS PROVIDED.
6. ALL SEGMENTS OF PVC STORM SEWER PIPE SHALL BE MANDREL TESTED FOR DEFLECTION PER ASTM D-3034 METHODOLOGY BY THE CONTRACTOR. THE ENGINEER OR OWNER'S REPRESENTATIVE MUST BE PRESENT DURING ALL DEFLECTION TESTING.
7. PIPE JOINTS SHALL BE:
   CONCRETE PIPE: BITUMINOUS MASTIC PER ASTM C-76 OR PUSH-ON FLEXIBLE RUBBER GASKET TYPE PER ASTM C-361 OR ASTM C-433.
   OR
   CLAY PIPE: PUSH-ON GASKET TYPE PER ASTM C-425
   OR
   PVC PIPE: PUSH-ON FLEXIBLE ELASTOMERIC SEAL TYPE PER ASTM D-3212
8. BEDDING SHALL BE MOIST AGGREGATE MATERIAL. FOUR (4) INCHES OF MOIST AGGREGATE SHALL BE PLACED UNDER THE PIPE.
9. BEDDING, HAUNCHING, INITIAL BACKFILL AND FINAL BACKFILL SHALL BE IN ACCORDANCE WITH THE STANDARD DETAILS AND NOTES ON THESE PLANS.
10. PROVIDE COMPACTED SELECTED GRANULAR MATERIAL FOR TRENCH BACKFILL WHEN THE INNER EDGE OF A TRENCH OR MANHOLE EXCAVATION IS WITHIN 2 FEET OF ANY PROPOSED OR EXISTING PAVEMENT, CURB, OR SIDEWALK. CONTROLLED LOW STRENGTH FLOWABLE FILL MATERIAL MAY BE UTILIZED IN LIEU OF COMPACTED SELECTED GRANULAR MATERIAL BACKFILL.
11. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN WATER AND SEWER FACILITIES. SEE SECTION 41-2.01B AND STANDARD DRAWINGS 18 THROUGH 24 OF THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" FOR WATER AND SEWER SEPARATION REQUIREMENTS. WATER MAIN CASING PIPE SHALL BE USED FOR A DISTANCE OF 10 FEET EACH WAY FROM THE STORM SEWER WHENEVER WATER/SEWER MINIMUM SEPARATION REQUIREMENTS CANNOT BE MAINTAINED.
12. WHERE REQUIRED FOR SEPARATION OR OTHER PURPOSES, DUCTILE IRON PIPE SHALL CONFORM TO AWWA C-151 AND ASTM A-746, THICKNESS CLASS 50 PER AWWA C-150 WITH MECHANICAL OR PUSH-ON RUBBER SEAL JOINTS PER AWWA C-111 AND SHALL BE INSTALLED PER AWWA C-600. PIPE SHALL HAVE A BITUMINOUS MATERIAL EXTERIOR COATING PER AWWA C-151 AND BE INSIDE LINED FOR SEWER USE PER ASTM A-746.
13. PRECISE LOCATION OF MANHOLES OR INLETS WILL BE REVIEWED IN THE FIELD BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
14. WYE CONNECTIONS TO STORM SEWERS OR DRAIN TILES, SUMP PUMP DISCHARGE PIPES AND SIMILAR SMALL DIAMETER LINES SHALL BE ALLOWED ONLY IF APPROVED BY THE ENGINEER AND OWNER'S REPRESENTATIVE. A WYE CONNECTION TO THE STORM SEWER SHALL BE MADE BY ONE OF THE METHODS INDICATED BELOW:
   A. CONCRETE PIPE: BITUMINOUS MASTIC PER ASTM C-76 OR PUSH-ON FLEXIBLE RUBBER GASKET TYPE PER ASTM C-361 OR ASTM C-433.
      OR
      CLAY PIPE: PUSH-ON GASKET TYPE PER ASTM C-425
      OR
      PVC PIPE: PUSH-ON FLEXIBLE ELASTOMERIC SEAL TYPE PER ASTM D-3212
   B. CIRCULAR SAW CUT OUT THE SEWER MAIN AND INSTALL A PRE MANUFACTURED SADDLE TAP CONNECTION IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION DIRECTIONS. ENCASE SADDLE TAP IN CONCRETE.
   C. USE OF A PREFABRICATED WYE.

   IF ANY OTHER METHOD IS DESIRED, THE CONTRACTOR SHALL SUBMIT SAID METHOD TO THE ENGINEER AND OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL BEFORE THE CONNECTION IS MADE. INDISCRIMINATE BREAKING OF THE SEWER MAIN PIPE IS NOT ALLOWED.
15. THE JOINTING OF DISSIMILAR PIPES SHALL BE ACCOMPLISHED BY USING APPROVED FABRICATED "BAND-SEAL" TYPE COUPLINGS AND CONCRETE ENCASEMENT OF 6 INCH THICKNESS EXTENDING 1 FOOT ON EACH SIDE OF THE JOINT.
16. THE NEED FOR REPLACEMENT OR REPAIR OF ANY TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE DETERMINED BY THE ENGINEER OR OWNER'S REPRESENTATIVE. THE REPAIR AND REPLACEMENT OF TILE SO ENCOUNTERED SHALL BE CONSIDERED AS AN EXTRA.
17. ALL SUBSURFACE DRAINAGE TILES AND SEWERS ENCOUNTERED AND DETERMINED TO REMAIN IN SERVICE BY THE ENGINEER OR OWNER'S REPRESENTATIVE SHALL BE REPAIRED OR CONNECTED TO PROPOSED STORM SEWER MANHOLES USING APPROPRIATE MATERIALS.
18. "TEES" TO CONNECT ENCOUNTERED SUBSURFACE TILES AND SEWERS MAY BE CONSTRUCTED IN THE FIELD ONLY WITH PRIOR APPROVAL OF THE ENGINEER OR OWNER'S REPRESENTATIVE.
19. BREAK-IN CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE BY CORE DRILLING OR SAW-CUTTING INTO THE SIDE OF THE MANHOLE FOR PROPER INSERTION OF THE NEW PIPE. THE CONNECTION SHALL BE SEALED WITH AN EXPANDING MORTAR OR GROUT AND A BITUMINOUS WATERPROOFING MATERIAL SHALL BE COATED ON THE OUTSIDE OF THE CONNECTION. THE CONCRETE BOTTOM (INVERT) OF THE MANHOLE SHALL BE REMOVED SUFFICIENTLY TO SET THE NEW SEWER CONNECTION AT THE APPROPRIATE ELEVATION AND A NEW INVERT POURED.
20. ALL INSIDE JOINTS OF THE MANHOLES AND INLETS SHALL BE FILLED WITH MORTAR AND BRUSHED SMOOTH.
21. MANHOLES OR INLETS CONSTRUCTED OF CONCRETE MASONRY UNITS SHALL HAVE ⅛ INCH TO ½ INCH OF MORTAR PLASTERED ON THE INSIDE AND OUTSIDE OF THE ENTIRE MANHOLE OR INLET AND THEN SEALED WITH A BITUMINOUS MASTIC WATERPROOF MATERIAL. MORTAR ON THE ENTIRE INSIDE OF THE MANHOLE OR INLET SHALL ALSO BE BRUSHED SMOOTH.
22. ALL STORM SEWER MANHOLES SHALL HAVE A MINIMUM OF 0.1 FOOT DROP IN INVERT ELEVATION FROM THE UPSTREAM TO THE DOWNSTREAM SEWER MAIN UNLESS OTHERWISE SHOWN ON THE PLANS.
23. STORM SEWER MANHOLE AND INLET CASTINGS SHALL BE DEPRESSED 1 TO 2 INCHES IN UNPAVED AREAS, ¼ TO ½ INCH IN PAVEMENT AREAS AND ½ TO 1 INCHES IN CURBS WITH APPROPRIATE TRANSITIONS IN CURBS TO AID THE DIRECTION OF RUNOFF INTO THE CASTING. CASTINGS SHALL BE SET IN ACCORDANCE WITH THE PLAN ELEVATION.
24. CASTING NUMBERS REFER TO NEENAH CASTINGS. APPROVED EQUALS MAY BE USED. ALL STANDARD CURB INLET FRAMES AND OPEN GRATE COVERS SHALL BE CAST BY THE MANUFACTURER WITH THE WORDAGE, "DUMP NO WASTE, DRAINS TO RIVER".
25. LEAKS TO EXISTING MANHOLES OR INLETS CAUSED BY CONSTRUCTION MUST BE REPAIRED BY THE CONTRACTOR.
26. PAVEMENT REPAIR WORK SHALL CONFORM TO THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
27. NO PAYMENT WILL BE MADE FOR INSTALLATION OF STORM SEWERS UNTIL ALL TRENCH BACKFILL HAS BEEN COMPACTED IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS, AND THE NOTES AND DETAILS ON THESE PLANS.
27. AGGREGATE BEDDING MATERIAL FOR HDPE AND PVC PIPE SHALL BE PLACED AND SHAPED IN THE TRENCH TO CONFORM TO THE OUTSIDE OF THE PIPE. AFTER THE PIPE IS LAID, AGGREGATE COVER SHALL BE PLACED ALONG BOTH SIDES OF THE PIPE AND WALKED IN OR RODDED TO COMPACT THE MATERIAL UNDER THE HAUNCHES OF THE PIPE. AGGREGATE COVER SHALL BE PLACED TO ONE (1) FOOT ABOVE THE TOP OF THE PIPE.

DESIGNED:	CB/RM
DRAFTED:	PE
CHECKED:	CB/ELC/TBB
FILE:	2612-51P1

REVISIONS

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Carle

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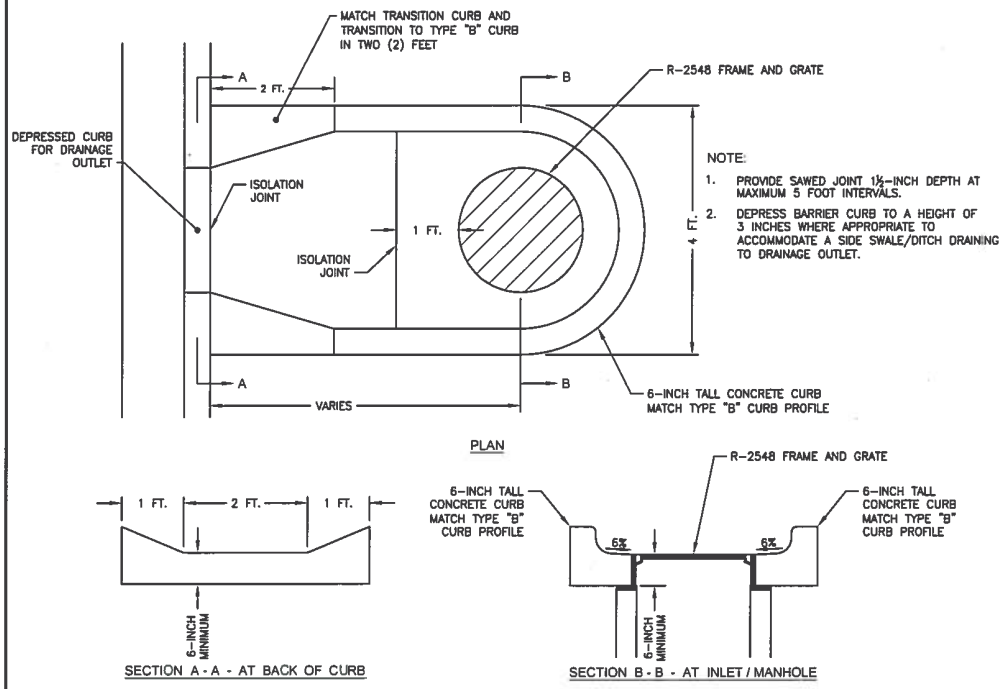
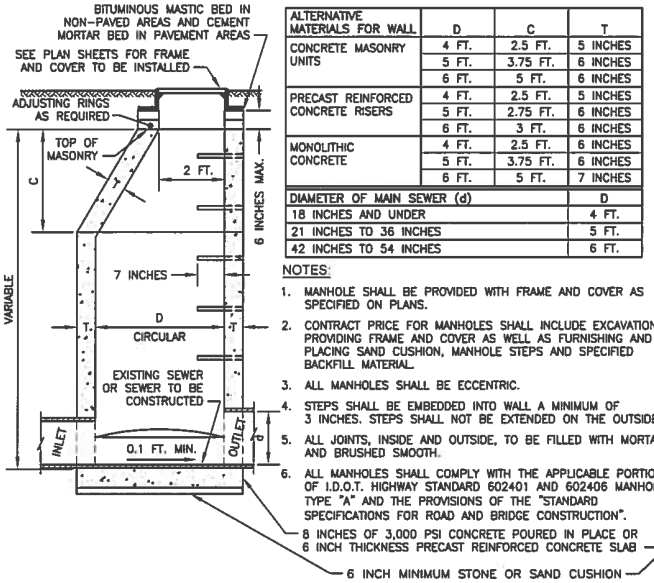
URBANA TOWNSHIP,
CHAMPAIGN COUNTY, ILLINOIS

STORM SEWER DETAILS AND NOTES

DATE: 050616
SHEET: 14 OF 27
JOB: 2612-51



CONCRETE DRAINAGE OUTLET TO INLET / MANHOLE
NO SCALE

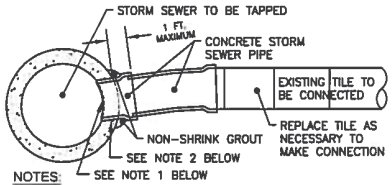


ALTERNATIVE MATERIALS FOR WALL	D	C	T
CONCRETE MASONRY UNITS	4 FT.	2.5 FT.	5 INCHES
	5 FT.	3.75 FT.	6 INCHES
	6 FT.	5 FT.	6 INCHES
PRECAST REINFORCED CONCRETE RISERS	4 FT.	2.5 FT.	5 INCHES
	5 FT.	2.75 FT.	6 INCHES
	6 FT.	3 FT.	6 INCHES
MONOLITHIC CONCRETE	4 FT.	2.5 FT.	6 INCHES
	5 FT.	3.75 FT.	6 INCHES
	6 FT.	5 FT.	7 INCHES

DIAMETER OF MAIN SEWER (d)	D
18 INCHES AND UNDER	4 FT.
21 INCHES TO 36 INCHES	5 FT.
42 INCHES TO 54 INCHES	6 FT.

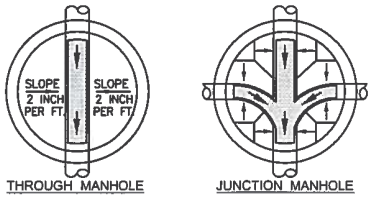
NOTES:
1. MANHOLE SHALL BE PROVIDED WITH FRAME AND COVER AS SPECIFIED ON PLANS.
2. CONTRACT PRICE FOR MANHOLES SHALL INCLUDE EXCAVATION, PROVIDING FRAME AND COVER AS WELL AS FURNISHING AND PLACING SAND CUSHION, MANHOLE STEPS AND SPECIFIED BACKFILL MATERIAL.
3. ALL MANHOLES SHALL BE ECCENTRIC.
4. STEPS SHALL BE EMBEDDED INTO WALL A MINIMUM OF 3 INCHES. STEPS SHALL NOT BE EXTENDED ON THE OUTSIDE.
5. ALL JOINTS, INSIDE AND OUTSIDE, TO BE FILLED WITH MORTAR AND BRUSHED SMOOTH.
6. ALL MANHOLES SHALL COMPLY WITH THE APPLICABLE PORTION OF I.D.O.T. HIGHWAY STANDARD 602401 AND 602406 MANHOLE TYPE "A" AND THE PROVISIONS OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

STANDARD STORM SEWER MANHOLE
ECCENTRIC MANHOLE
NO SCALE

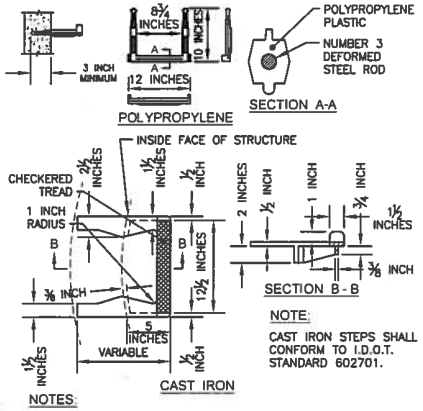


NOTES:
1. BEVEL END OF PIPE, INSERT TO MINIMIZE PROJECTION INTO STORM SEWER.
2. UTILIZE CIRCULAR HOLE SAW OR DEMOLITION SAW TO CLEAN SAWCUT OPENING INTO STORM SEWER.

TILE CONNECTION
NO SCALE



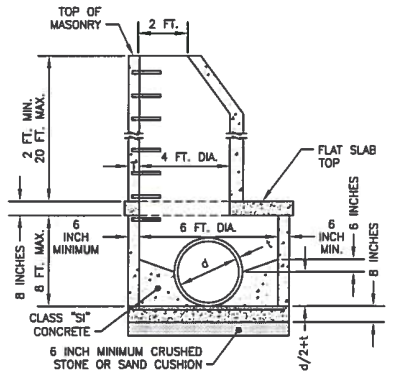
MANHOLE INVERTS
NO SCALE



NOTE:
CAST IRON STEPS SHALL CONFORM TO I.D.O.T. STANDARD 602701.

NOTES:
1. MANHOLE STEPS SHALL CONFORM TO ASTM C-478 & RESIST PULL-OUT FORCES TO 1900 LBS.
2. STEPS SHALL BE PLACED INTO WET CONCRETE WALL DURING MANUFACTURING.

MANHOLE STEPS
NO SCALE



NOTE:
6 FOOT DIAMETER MANHOLES SHALL CONFORM TO I.D.O.T. STANDARD 602406.

ALTERNATIVE MATERIALS FOR RISERS WALLS	T (MIN)
CONCRETE MASONRY UNITS	5 INCHES
PRECAST REINFORCED CONCRETE SECTIONS	4 INCHES
CAST-IN-PLACE CONCRETE	6 INCHES

6 FOOT DIAMETER STORM SEWER MANHOLE
USE WITH 48 INCH AND 54 INCH DIAMETER PIPES
NO SCALE

JULIE
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FOR UTILITY LOCATIONS CALL JULIE. (800) 892-0123

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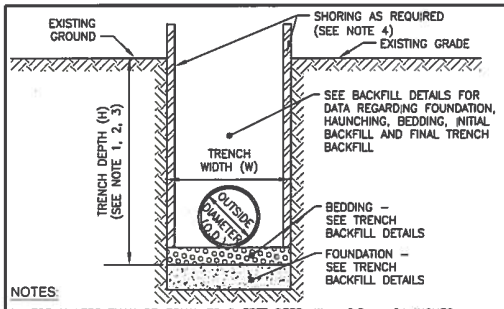
CHAMPAIGN COUNTY, ILLINOIS

STORM SEWER DETAILS AND NOTES

DATE: 050616
SHEET: 15 OF 27
JOB: 2612-51

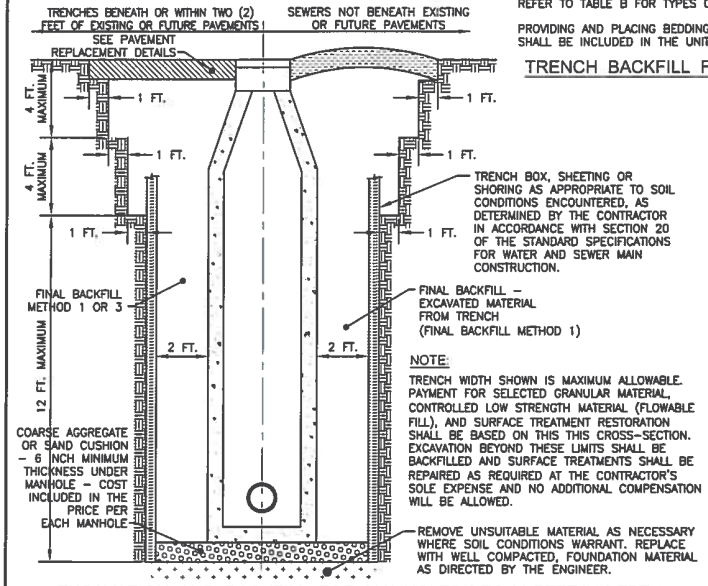


NOTES:

1. FOR H LESS THAN OR EQUAL TO 5 FEET DEEP, W = O.D. + 24 INCHES.
2. FOR H GREATER THAN 5 FEET DEEP, W = O.D. + 36 INCHES.
3. FOR H GREATER THAN 20 FEET DEEP, CONTRACTOR SHALL PROVIDE A TRENCH STRUCTURAL SUPPORT SYSTEM DESIGNED BY AN ILLINOIS PROFESSIONAL ENGINEER OR AN ILLINOIS STRUCTURAL ENGINEER.
4. CONTRACTOR SHALL UTILIZE STRUCTURAL SUPPORT SYSTEMS IN ACCORDANCE WITH SECTION 20 OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS.
5. TRENCH WIDTH SHOWN IS MAXIMUM ALLOWABLE. PAYMENT FOR SELECTED GRANULAR MATERIAL, CONTROLLED LOW STRENGTH MATERIAL (FLOWABLE FILL), AND SURFACE TREATMENT RESTORATION SHALL BE BASED ON THIS CROSS-SECTION. EXCAVATION BEYOND THESE LIMITS SHALL BE BACKFILLED AND SURFACES SHALL BE REPAIRED AS REQUIRED AT THE CONTRACTOR'S SOLE EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

UTILITY TRENCH EXCAVATION FOR CONDUITS 0 TO 20 FEET IN DEPTH

LIMITS OF EXCAVATION FOR SANITARY SEWERS, STORM SEWERS, WATER MAIN AND OTHER UTILITIES
NO SCALE

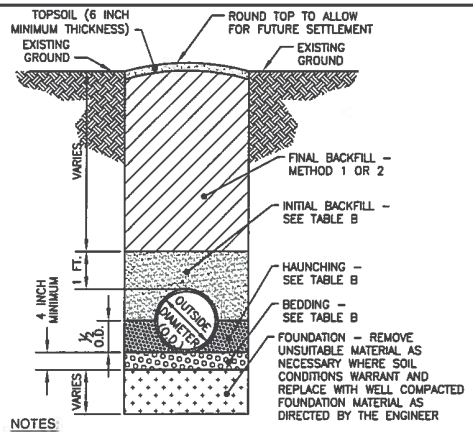


NOTE:

TRENCH WIDTH SHOWN IS MAXIMUM ALLOWABLE. PAYMENT FOR SELECTED GRANULAR MATERIAL, CONTROLLED LOW STRENGTH MATERIAL (FLOWABLE FILL), AND SURFACE TREATMENT RESTORATION SHALL BE BASED ON THIS THIS CROSS-SECTION. EXCAVATION BEYOND THESE LIMITS SHALL BE BACKFILLED AND SURFACE TREATMENTS SHALL BE REPAIRED AS REQUIRED AT THE CONTRACTOR'S SOLE EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

EXCAVATION AND BACKFILL FOR MANHOLES 0 TO 20 FEET IN DEPTH

LIMITS OF EXCAVATION, BACKFILL, AND SURFACE RESTORATION FOR PAYMENT QUANTITIES
NO SCALE



NOTES:

METHOD 1 FINAL BACKFILL: 12 INCH MAXIMUM LIFTS WITH MATERIAL EXCAVATED FROM THE TRENCH AND COMPACT BY RAMMING OR TAMPING TO 85% STANDARD PROCTOR DENSITY.

METHOD 2 FINAL BACKFILL: INUNDATION AND WATER JETTING: REFER TO DIVISION II, SECTION 20 OF THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" DATED: 2014.

NON-PAVEMENT AREA: ALL AREAS NOT BENEATH OR WITHIN TWO (2) FEET OF OR EXISTING PROPOSED PAVEMENTS, CURBS, SHOULDERS OR SIDEWALKS.

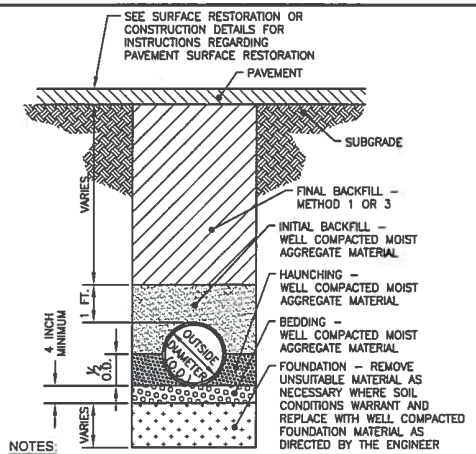
REFER TO TABLE A FOR NON-FINAL BACKFILL COMPACTION REQUIREMENTS.

REFER TO TABLE B FOR TYPES OF BACKFILL MATERIALS UTILIZED.

PROVIDING AND PLACING BEDDING, HAUNCHING AND INITIAL BACKFILL MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE PER LINEAL FOOT OF CONDUIT.

TRENCH BACKFILL FOR NON-PAVEMENT AREAS

NO SCALE



NOTES:

METHOD 1 FINAL BACKFILL: SELECTED GRANULAR MATERIAL SHALL BE MOIST AGGREGATE MATERIAL MEETING THE REQUIREMENTS OF TABLE A, SHALL BE DEPOSITED IN UNIFORM LAYERS NOT EXCEEDING SIX (6) INCH THICKNESS (LOOSE MEASURE), AND EACH LAYER SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.

METHOD 3 FINAL BACKFILL: CONTROLLED LOW STRENGTH MATERIAL (FLOWABLE FILL). REFER TO DIVISION II, SECTION 20 OF THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" DATED: 2014.

REFER TO TABLE A FOR NON-FINAL BACKFILL COMPACTION REQUIREMENTS.

PAVEMENT AREAS: BENEATH OR WITHIN TWO (2) FEET OF EXISTING OR PROPOSED PAVEMENTS, CURBS, SHOULDERS, OR SIDEWALKS.

PROVIDING AND PLACING BEDDING HAUNCHING AND INITIAL BACKFILL MATERIAL SHALL BE INCLUDED IN THE PRICE OF CONDUIT.

TRENCH BACKFILL FOR PAVEMENT AREAS

NO SCALE

TRENCH EXCAVATION AND BACKFILL NOTES

1. ALL TRENCH EXCAVATION AND BACKFILL WORK SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" 7TH EDITION, DATED 2014, THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS, AND THE NOTES AND DETAILS CONTAINED IN THESE PLANS. BEDDING, INITIAL BACKFILL AND FINAL BACKFILL SHALL BE IN ACCORDANCE WITH THE STANDARD DETAILS AND SECTION 20 OF THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS".
2. THE REPRESENTATIVE OF THE ENGINEER OR OWNER SHALL BE PRESENT DURING CONSTRUCTION ACTIVITIES, AND ALL WORK SHALL BE SUBJECT TO OBSERVATION BY THE ENGINEER OR THE OWNER'S REPRESENTATIVE.
3. ORGANIC SOILS (TOPSOIL) FROM TRENCH EXCAVATION SHALL BE STRIPPED, SEGREGATED AND STOCKPILED SEPARATELY DURING CONSTRUCTION. NOT LESS THAN 6 INCHES OF TOPSOIL SHALL BE SPREAD ON THE TOP OF ALL DISTURBED TURF AREAS. THE ENGINEER OR OWNER'S REPRESENTATIVE SHALL DETERMINE SOILS SUITABLE FOR USE AS TOPSOIL. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT, AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED. IF THE CONTRACTOR FAILS TO SEGREGATE TOPSOIL DURING TRENCH EXCAVATION HE SHALL FURNISH SUITABLE REPLACEMENT TOPSOIL AT CONTRACTOR'S EXPENSE.
4. ALL EXCAVATIONS SHALL BE PROTECTED BY SHORING, BRACING, SHEETING, UNDERPINNING, TRENCH BOXES OR OTHER METHODS TO PREVENT CAVE-IN OR LOOSE SOIL FROM FALLING INTO TRENCHES. THE STRUCTURAL STRENGTH AND SAFETY OF ALL SUCH WORK SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL BE FAMILIAR WITH AND SHALL STRICTLY COMPLY WITH ALL APPLICABLE O.S.H.A. REGULATIONS.
5. THE CONTRACTOR SHALL DISPOSE OF ALL EXCESS EXCAVATED MATERIAL OFF-SITE OR AT THE SITE AS INDICATED IN THE PLANS OR AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
6. PROVIDE COMPACTED SELECTED GRANULAR MATERIAL FOR INITIAL AND FINAL BACKFILL WHEN THE INNER EDGE OF A TRENCH OR MANHOLE EXCAVATION IS BENEATH OR WITHIN 2 FEET OF ANY PROPOSED OR EXISTING PAVEMENT, CURB, SHOULDER OR SIDEWALK (METHOD 1). THE COST OF ALL SELECTED GRANULAR MATERIAL FOR TRENCH BACKFILL SHALL BE MEASURED AND PAID FOR AS HEREIN DESCRIBED.
7. THE CONTRACTOR MAY, FOR HIS CONVENIENCE AND AT HIS DISCRETION, SUBSTITUTE CONTROLLED LOW STRENGTH MATERIAL (CLSM) BACKFILL (FLOWABLE FILL) IN LIEU OF SELECTED GRANULAR TRENCH BACKFILL MATERIAL.
8. FURNISHING AND PLACING BEDDING, HAUNCHING AND INITIAL BACKFILL SHALL BE INCLUDED IN THE PRICE FOR SEWERS AND CONDUITS AND SHALL NOT BE PAID FOR SEPARATELY.
9. NO PAYMENT WILL BE MADE FOR INSTALLATION OF ANY CONDUIT UNTIL ALL TRENCH BACKFILL HAS BEEN COMPACTED IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THESE PLANS.

TABLE A

COMPACTION REQUIREMENTS FOR MOIST AGGREGATE MATERIALS FOR FOUNDATION, BEDDING, HAUNCHING, AND INITIAL BACKFILL ONLY

GRADATION	MINIMUM COMPACTION REQUIREMENT STANDARD PROCTOR
CA-6, CA-9, CA-13, CA-16	90%
FA-5, FA-6, FA-10	90%
CA-7, CA-11	RAMMING & TAMPING

NOTE:

MOIST AGGREGATE MATERIALS FOR FOUNDATION, BEDDING, HAUNCHING AND INITIAL BACKFILL SHALL MEET THE REQUIREMENTS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" FOR COARSE AGGREGATE OR FINE AGGREGATE MATERIAL AS NOTED IN TABLE B.

TABLE B

TRENCH BACKFILL MATERIALS FOR NON-PAVEMENT AREA

CONDUIT MATERIALS	BEDDING	HAUNCHING	INITIAL BACKFILL	FINAL BACKFILL
STORM SEWER / CULVERTS				
CONCRETE	AGG	AGG	FGM	EXM
VITRIFIED CLAY	AGG	AGG	AGG	EXM
DUCTILE IRON	AGG	AGG	FGM	EXM
PVC OR HDPE	AGG	AGG	AGG	EXM
CMP	AGG	AGG	AGG	EXM
SANITARY SEWERS				
VITRIFIED CLAY	AGG	AGG	AGG	EXM
PVC OR HDPE	AGG	AGG	AGG	EXM
DUCTILE IRON	AGG	AGG	FGM	EXM
WATER MAIN				
DUCTILE IRON	AGG	AGG	FGM	EXM
PVC	AGG	AGG	AGG	EXM
COPPER TUBING	AGG	AGG	AGG	EXM
PE TUBING	AGG	AGG	AGG	EXM

AGG – MOIST AGGREGATE MATERIALS
FGM – FINE GRAINED MATERIAL EXCAVATED FROM THE TRENCH
EXM – EXISTING MATERIALS EXCAVATED FROM THE TRENCH

FOR FLEXIBLE PIPE, EMBEDMENT MATERIAL SHALL COMPLY WITH CLASS II IN ACCORDANCE WITH ASTM D-2321.

FOR CONCRETE OR VITRIFIED CLAY PIPE, EMBEDMENT MATERIAL SHALL BE IN ACCORDANCE WITH ASTM C-12.

JULIE. NOTE: THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES. FOR UTILITY LOCATIONS CALL JULIE. (800) 892-0123

DESIGNED: CB/RM	REVISIONS	
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TRENCH EXCAVATION AND BACKFILL DETAILS AND NOTES

DATE: 050616
SHEET: 16 OF 27
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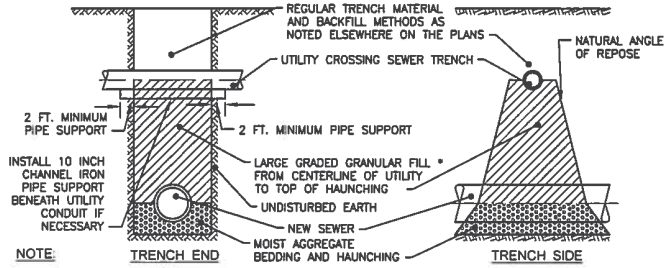


NOTE:

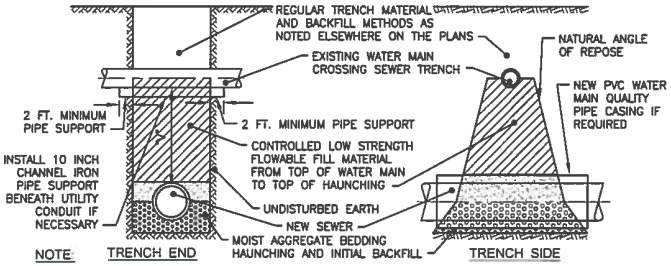
IF UTILITY IS LESS THAN 12 INCHES ABOVE THE TOP OF THE SEWER PIPE, ENCASE THE SEWER PIPE IN CONCRETE FOR 2 FEET ON EACH SIDE OF THE CROSSING AND UP TO THE CENTERLINE OF THE UTILITY.

* 3 INCH AGGREGATE (I.D.O.T. GRADATION CA-1) OR OVERSIZE RIVER ROCK (2 INCH TO 6 INCH SIZE) OR CLASS "X" RIVER ROCK (5/8 INCH TO 1½ INCH SIZE)

UTILITY CROSSING REPAIR FOR SEWER

STORM OR SANITARY SEWER CROSSING BENEATH EXISTING UTILITY (GAS, ELECTRIC, TELEPHONE, CABLE TV, CONDUIT)

NO SCALE



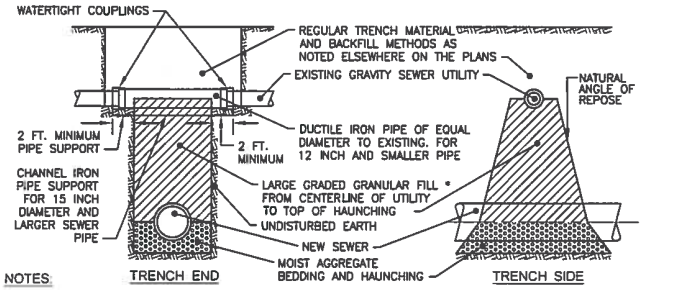
NOTE:

IF "V" IS LESS THAN 18 INCHES PROVIDE 22 FEET LONG PVC WATER MAIN QUALITY PIPE CASING AROUND PROPOSED SEWER (SEAL BOTH ENDS).

WATER MAIN CROSSING REPAIR FOR SEWER

STORM OR SANITARY SEWER CROSSING BENEATH EXISTING WATER MAIN

NO SCALE



NOTES:

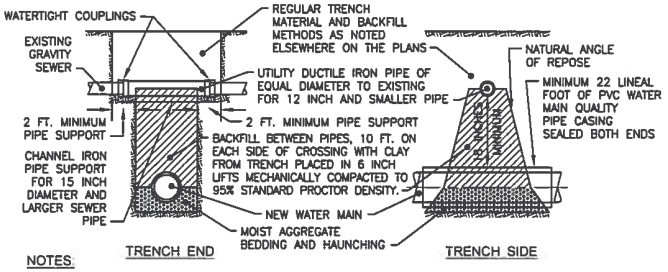
1. IF UTILITY IS LESS THAN 12 INCHES ABOVE THE TOP OF THE SEWER PIPE, ENCASE SEWER PIPE IN CONCRETE FOR 2 FEET ON EACH SIDE OF THE CROSSING AND UP TO THE CENTERLINE OF THE UTILITY.
2. CONTRACTOR SHALL CHECK THE CONDITION OF THE GRAVITY SEWER UTILITY IN EACH DIRECTION TO VERIFY THAT THE UTILITY HAS NOT BEEN DAMAGED OR CRUSHED BY CONSTRUCTION AND THAT NO SOIL HAS ENTERED THE UTILITY.
3. IF UTILITY IS LARGER THAN 12 INCHES IN DIAMETER, UTILIZE REINFORCED CONCRETE OR VITRIFIED CLAY PIPE FOR UTILITY SEWER REPAIR AND PROVIDE 10 INCH CHANNEL IRON PIPE SUPPORT FOR UTILITY SEWER.

* 3 INCH AGGREGATE (I.D.O.T. GRADATION CA-1) OR OVERSIZE RIVER ROCK (2 INCH TO 6 INCH SIZE) OR CLASS "X" RIVER ROCK (5/8 INCH TO 1½ INCH SIZE)

GRAVITY SEWER UTILITY CROSSING REPAIR FOR SEWER

STORM OR SANITARY SEWER CROSSING BENEATH GRAVITY SEWER UTILITY (FIELD TILE, STORM SEWER, SANITARY COLLECTOR SEWER)

NO SCALE



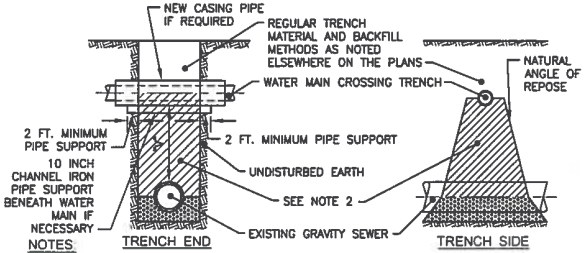
NOTES:

1. GRAVITY STORM OR SANITARY SEWER UTILITY SHALL BE NOT LESS THAN 18 INCHES ABOVE THE TOP OF THE WATER MAIN PIPE.
2. CONTRACTOR SHALL CHECK THE CONDITION OF THE GRAVITY SEWER UTILITY IN EACH DIRECTION TO VERIFY THAT THE UTILITY HAS NOT BEEN DAMAGED OR CRUSHED BY CONSTRUCTION AND THAT NO SOIL HAS ENTERED THE UTILITY.
3. IF UTILITY IS LARGER THAN 12 INCHES IN DIAMETER, UTILIZE REINFORCED CONCRETE OR VITRIFIED CLAY PIPE FOR UTILITY SEWER REPAIR AND PROVIDE 10 INCH CHANNEL IRON PIPE SUPPORT FOR UTILITY SEWER.
4. IF SEWER UTILITY IS 12 INCHES IN DIAMETER OR SMALLER, REPLACE SEWER UTILITY WITH DUCTILE IRON PIPE.

GRAVITY SEWER UTILITY CROSSING REPAIR FOR WATER MAIN

WATER MAIN CROSSING BENEATH GRAVITY SEWER UTILITY (FIELD TILE, STORM SEWER, SANITARY COLLECTOR SEWER)

NO SCALE



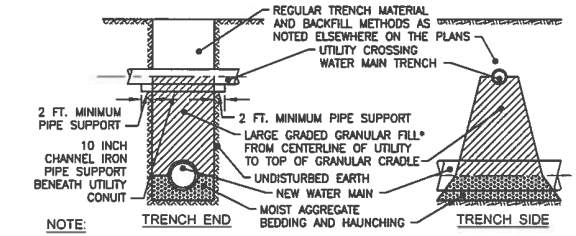
NOTES:

1. IF "V" IS LESS THAN 18 INCHES INSTALL PVC WATER MAIN QUALITY PIPE CASING AROUND WATER MAIN A MINIMUM OF 11 FEET EACH SIDE OF WATER MAIN CROSSING (SEAL BOTH ENDS).
2. IF GRANULAR BACKFILL EXISTS BETWEEN WATER MAIN AND SEWER REMOVE EXISTING GRANULAR MATERIAL AND INSTALL CONTROLLED LOW STRENGTH FLOWABLE FILL MATERIAL.

WATER MAIN CROSSING GRAVITY SEWER

WATER MAIN CROSSING ABOVE EXISTING GRAVITY SEWER

NO SCALE



NOTE:

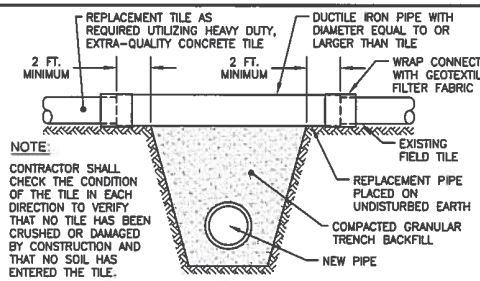
IF UTILITY IS LESS THAN 12 INCHES ABOVE THE TOP OF THE WATER MAIN PIPE, ENCASE THE WATER MAIN PIPE IN CONCRETE FOR 2 FEET ON EACH SIDE OF THE CROSSING AND UP TO THE CENTERLINE OF THE UTILITY.

* 3 INCH AGGREGATE (I.D.O.T. GRADATION CA-1) OR OVERSIZE RIVER ROCK (2 INCH TO 6 INCH SIZE) OR CLASS "X" RIVER ROCK (5/8 INCH TO 1½ INCH SIZE)

UTILITY CROSSING REPAIR FOR WATER MAIN

WATER MAIN CROSSING BENEATH EXISTING UTILITY (WATER, GAS, ELECTRIC, TELEPHONE, CABLE TV, CONDUIT)

NO SCALE

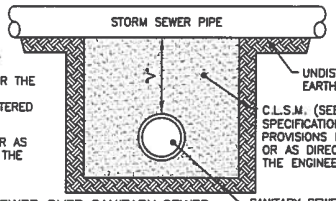


NOTE:

CONTRACTOR SHALL CHECK THE CONDITION OF THE TILE IN EACH DIRECTION TO VERIFY THAT NO TILE HAS BEEN CRUSHED OR DAMAGED BY CONSTRUCTION AND THAT NO SOIL HAS ENTERED THE TILE.

TILE REPAIR / REPLACEMENT

NO SCALE

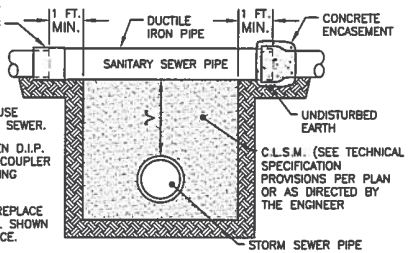


NOTE:

IF STORM SEWER IS IN PLACE;

1. USE DUCTILE IRON PIPE FOR THE SANITARY SEWER, WITH ONE 18 FOOT PIPE LENGTH CENTERED ON CROSSING, AND
2. RECONSTRUCT STORM SEWER AS REQUIRED, IF DIRECTED BY THE ENGINEER.

STORM SEWER OVER SANITARY SEWER



NOTES:

1. IF "V" IS LESS THAN 18 INCHES USE DUCTILE IRON PIPE FOR MINIMUM 10 FEET EACH DIRECTION FROM CROSSING.
2. IF "V" IS MORE THAN 18 INCHES USE APPROVED MATERIAL FOR SANITARY SEWER.
3. WHEN MAKING A COUPLING BETWEEN D.I.P. AND E.S.V.C.P. USE A BAND TYPE COUPLER OR JUTE AND A BITUMINOUS JOINTING MATERIAL ENCASED IN CONCRETE.
4. IF SANITARY SEWER IS IN PLACE, REPLACE WITH DUCTILE IRON PIPE TO DETAIL SHOWN REGARDLESS OF VERTICAL CLEARANCE.

SANITARY SEWER OVER STORM SEWER

SANITARY / STORM SEWER CROSSING

NO SCALE

UTILITY CROSSING NOTES

1. WATER MAIN QUALITY PVC CASING PIPE SHALL BE SCHEDULE 40 OR EQUAL WITH A MINIMUM PRESSURE RATING OF 160 P.S.I.
2. SEAL ENDS OF CASING PIPE WITH A MINIMUM OF ½ CUBIC YARD OF CONCRETE OR EXPANDING FOAM PLUG.
3. DUCTILE IRON PIPE FOR SEWER OR TILE REPAIR SHALL BE THICKNESS CLASS 50 OR GREATER COMPLYING WITH AWWA C-151 WITH BITUMINOUS MATERIAL EXTERIOR COATING AND CEMENT LINED INTERIOR PER AWWA C-150.
4. CONTRACTOR SHALL STRICTLY ADHERE TO THE 10 FOOT HORIZONTAL AND 18 INCH VERTICAL SEPARATION REQUIREMENTS BETWEEN WATER MAINS AND STORM AND SANITARY SEWERS AT ALL TIMES. IF A WATER/SEWER SEPARATION CONFLICT IS IDENTIFIED DURING CONSTRUCTION THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OR OWNER'S REPRESENTATIVE.
5. CONTRACTOR SHALL COMPLY WITH SUBSECTION 41-2.01 AND STANDARD DRAWINGS 18 THROUGH 24 OF THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS", 7TH EDITION, AT ALL TIMES.

J.U.L.I.E. NOTE: THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES. FOR UTILITY LOCATIONS CALL JULIE (800) 892-0123	DESIGNED: CB/RM	REVISIONS	
	DRAFTED: PE		
	CHECKED: CB/ELC/TBB		
	FILE: 2612-51P1		

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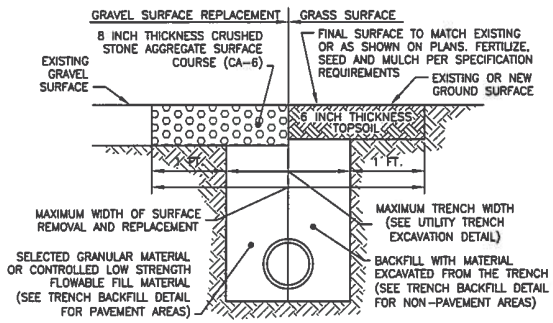
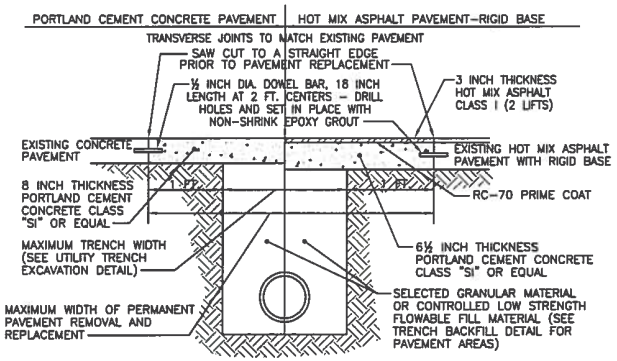
URBANA TOWNSHIP,
CHAMPAIGN COUNTY, ILLINOIS

UTILITY CROSSING DETAILS AND NOTES

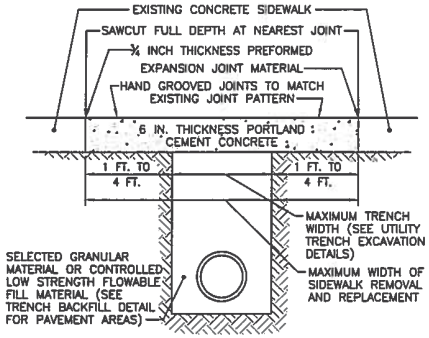
DATE: 050616
SHEET: 17 OF 27
JOB: 2612-51



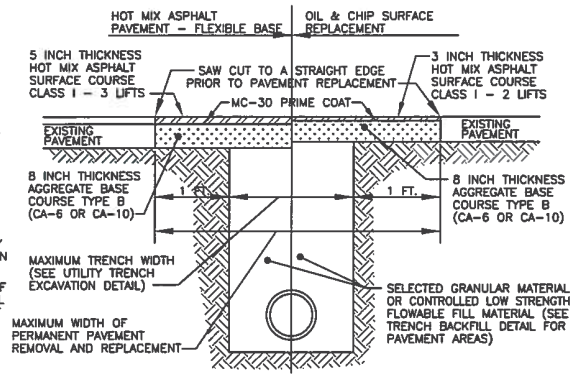
SURFACE RESTORATION
NO SCALE



RIGID PAVEMENT REPLACEMENT
NO SCALE



PRIVATE DRIVEWAY AND SIDEWALK REPLACEMENT
NO SCALE



FLEXIBLE PAVEMENT REPLACEMENT
NO SCALE

SURFACE RESTORATION NOTES

1. ALL SURFACE RESTORATION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION, THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, AND THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS AND THE NOTES AND DETAILS CONTAINED IN THESE PLANS.
2. THE SUBGRADE FOR PAVEMENTS SHALL BE PREPARED IN ACCORDANCE WITH SECTION 301 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND THE NOTES AND DETAILS CONTAINED IN THESE PLANS. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICES FOR THE VARIOUS PAVEMENT REPLACEMENT ITEMS.
3. SUBGRADE PREPARATION INCLUDES FINAL GRADING AND SHAPING THE SUBGRADE TO THE LINES AND GRADES SHOWN ON THE PLANS AND COMPACTING THE SUBGRADE TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
4. STREET PAVEMENT SUBGRADES SHALL HAVE A CALIFORNIA BEARING RATIO (CBR) OF AT LEAST SIX PERCENT (6%) IN THE TOP TWELVE (12) INCHES OF SUBGRADE, PROVIDED THAT THE SUBGRADE IS WITHIN ONE-TENTH (0.1) OF A FOOT OF FINAL GRADE. THE CBR PERCENTAGE WILL BE ASCERTAINED BY USING OF A DYNAMIC CONE PENETROMETER (DCP) TESTS.
5. AGGREGATE BASE COURSE SHALL BE CA-6 OR CA-10 CRUSHED STONE AGGREGATE OF THE THICKNESS SHOWN ON THE PLANS AND COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
6. THE CONTRACTOR SHALL REPAIR ALL CRUSHED STONE DRIVEWAYS AND STREET SURFACES WITH 8 INCH THICKNESS AGGREGATE SURFACE COURSE CRUSHED STONE CA-6 OR CA-10 COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
7. PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTIONS 420 AND 442 OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
8. PORTLAND CEMENT CONCRETE FOR STREET PAVEMENTS SHALL BE HIGH EARLY STRENGTH TYPE, WITH A MINIMUM OF SIX (6) BAG MIX, WITH FIVE PERCENT (5%) TO EIGHT PERCENT (8%) ENTRAINED AIR. THE CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH IN THREE (3) DAYS OF 3,500 P.S.I.. THE MAXIMUM SLUMP SHALL BE THREE (3) INCHES. FAILURE TO MEET ANY OF THESE REQUIREMENTS SHALL BE CAUSE FOR REJECTION OF THE CONCRETE.
9. CURBS INDICATED TO BE POURED MONOLITHICALLY WITH PAVEMENTS MAY BE POURED AS SEPARATE CURB AND GUTTER AT THE DISCRETION OF THE CONTRACTOR. PAVEMENTS SHALL BE JOINED TO CURB AND GUTTER WITH A CONSTRUCTION JOINT.
10. TRANSVERSE AND LONGITUDINAL JOINTS SHALL BE CONSTRUCTED IN ALL PORTLAND CEMENT CONCRETE PAVEMENTS TO MATCH EXISTING PAVEMENT JOINTS. SAWCUTS SHALL BE MADE WITHIN EIGHT (8) HOURS OF PLACING THE CONCRETE.
11. PAVEMENT JOINTS SHALL BE CONSTRUCTED AND LOCATED IN ACCORDANCE THE DETAILS SHOWN ON THE PLANS. CONSTRUCTION JOINTS SHALL BE USED BETWEEN POURS. NUMBER 4 REBARS, 30 INCHES LONG ON 30 INCH CENTERS SHALL BE PLACED AT MID-DEPTH OF THE PAVEMENT.
12. DOWEL BARS SHALL BE PLAIN ROUND BILLET-STEEL BARS MEETING THE REQUIREMENTS OF "STANDARD SPECIFICATIONS FOR BILLET-STEEL CONCRETE REINFORCEMENT BARS", ASTM DESIGNATION A-15. THE FINISHED BARS SHALL BE FREE FROM BURS OR OUT-OF-ROUND ENDS WHICH WOULD PREVENT EASY SLIPPAGE IN THE DOWEL CAPS.
13. ALL CONCRETE USED FOR PAVEMENT CONSTRUCTION SHALL BE VIBRATED FOR CONSOLIDATION TO REMOVE VOIDS AND AIR POCKETS. WATER SHALL NOT BE ADDED TO THE SURFACE OF THE CONCRETE FOR FINISHING PURPOSES.
14. PORTLAND CEMENT CONCRETE PAVEMENT SHALL HAVE A HEAVY BROOMED FINISH TRANSVERSE TO THE DIRECTION OF TRAVEL. PAVEMENTS AND CURBS SHALL BE CURED USING AN APPROVED CURING COMPOUND.
15. TRAFFIC SHALL NOT BE ALLOWED ON PORTLAND CEMENT CONCRETE PAVEMENTS FOR AT LEAST FOUR (4) DAYS.
16. PORTLAND CEMENT CONCRETE SIDEWALKS AND PRIVATE DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 424 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
17. PORTLAND CEMENT CONCRETE FOR SIDEWALKS AND PRIVATE DRIVEWAYS SHALL BE MIX "SI" OR EQUIVALENT, HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3500 P.S.I. AT 14 DAYS, FIVE (5) TO EIGHT (8) PERCENT AIR CONTENT AND NOT GREATER THAN FOUR (4) INCHES SLUMP.
18. SIDEWALKS AND DRIVEWAYS SHALL BE VIBRATED FOR CONSOLIDATION AND SHALL BE CURED USING AN APPROVED CURING COMPOUND OR POLYETHYLENE FILM.
19. SIDEWALKS AND DRIVEWAYS SHALL BE GIVEN A LIGHT BROOM FINISH TRANSVERSE TO THE DIRECTION OF TRAVEL, MATCHING THE FINISH OF ADJACENT EXISTING SIDEWALK OR DRIVEWAY.
20. FORMS SHALL NOT BE REMOVED FOR 24 HOURS. CARE SHOULD BE EXERCISED WHEN REMOVING THE FORMS SO CONCRETE EDGES ARE NOT CRACKED OR DAMAGED. AFTER FORMS ARE REMOVED, ALL VISIBLE VOIDS AND HONEYCOMBS SHALL BE FILLED IN WITH MORTAR OR GROUT AND BRUSHED SMOOTH.
21. HOT MIX ASPHALT PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 406 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND THE NOTES AND DETAILS ON THESE PLANS. THE LIFTS SHALL BE PLACED AS NOTED ON THE PLANS. NO LIFTS SHALL EXCEED 2 INCHES IN THICKNESS.
22. AN ILLINOIS DEPARTMENT OF TRANSPORTATION APPROVED MIX DESIGN SPECIFICATION SHEET SHALL BE SUBMITTED TO THE ENGINEER OR OWNER'S REPRESENTATIVE PRIOR TO USE OF THE HOT MIX ASPHALT MIXTURE FOR PAVEMENT CONSTRUCTION. APPROVAL OF THE MIX DESIGN SHALL IN NO WAY ALLEVIATE CONTRACTOR OF ITS DUTY TO SUPPLY MATERIALS MEETING ALL REQUIREMENTS.
23. BITUMINOUS MATERIALS MUST BE PRODUCED AT AN ILLINOIS DEPARTMENT OF TRANSPORTATION APPROVED PLANT.
24. PRIME COAT FOR AGGREGATE SUBBASES SHALL BE MC-30 AND SHALL BE APPLIED TO THE AGGREGATE BASE AT A RATE OF 0.25 GALLONS PER SQUARE YARD. PRIME COAT FOR RIGID SUBBASES SHALL BE RC-70 AND SHALL BE APPLIED AT A RATE OF 0.05 GALLONS PER SQUARE YARD.
25. HOT MIX ASPHALT BINDER AND SURFACE COURSES SHALL BE COMPACTED TO AN AVERAGE DENSITY OF 92.0 TO 96.0 PERCENT OF THE THEORETICAL MAXIMUM DENSITY AS DETERMINED BY THE ILLINOIS MODIFIED AASHTO T209. NO INDIVIDUAL TEST SHALL BE BELOW 92.0 PERCENT.
26. THE CONTRACTOR SHALL REPAIR ALL OIL AND CHIP ROAD SURFACES WITH 8 INCH THICKNESS CRUSHED STONE BASE COURSE OF CA-6 AND A 3 INCH THICKNESS HOT MIX ASPHALT SURFACE COURSE PLACED IN 2 LIFTS.
27. EXISTING OR NEW CONCRETE OR HOT MIX ASPHALT PAVEMENTS, SIDEWALKS, CURBS, AND DRIVEWAYS DAMAGED BY CONSTRUCTION OPERATIONS AND NOT DESIGNATED FOR REMOVAL AND REPLACEMENT SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
28. SURFACE RESTORATION WORK THAT IS PERFORMED AND DOES NOT CONFORM TO ALL THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS WILL BE REJECTED AND WILL NOT BE MEASURED FOR PAYMENT.

TOPSOIL - FERTILIZING - SEEDING - MULCHING NOTES

1. FURNISHING AND PLACING TOPSOIL SHALL BE IN ACCORDANCE WITH SECTIONS 211 AND 212 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
2. SEEDING AND MULCHING SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS 250 AND 251 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
3. ORGANIC SOILS (TOPSOIL) FROM EXCAVATIONS AROUND THE SITE SHALL BE STRIPPED, SEGREGATED AND STOCKPILED DURING CONSTRUCTION AND SPREAD ON THE TOP OF DISTURBED AREAS. THE ENGINEER OR OWNER'S REPRESENTATIVE SHALL DETERMINE SOILS SUITABLE FOR USE AS TOPSOIL DURING CONSTRUCTION. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. IF CONTRACTOR FAILS TO SEGREGATE TOPSOIL DURING EXCAVATION HE SHALL FURNISH SUITABLE REPLACEMENT TOPSOIL AT CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR SHALL PLACE A MINIMUM OF 6 INCHES OF TOPSOIL IN THE EXCAVATED AREAS DESIGNATED ON THE PLANS AND IN AREAS DISTURBED DURING CONSTRUCTION. THE CONTRACTOR SHALL HAND RAKE THE TOPSOIL REMOVING ALL ROCKS, STICKS AND DEBRIS FROM THE AREA. THE CONTRACTOR SHALL PLACE 12-12-12 FERTILIZER AT A RATE OF 400 POUNDS PER ACRE AND LIME AT A RATE OF ONE TON PER ACRE UPON ALL DISTURBED AREAS.
5. SEEDING SHALL TAKE PLACE AS SOON AS FINISH GRADING OPERATIONS ARE COMPLETE.
6. ALL TURF AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE SEEDED IN LOCATIONS SPECIFIED BY THE ENGINEER OR OWNER'S REPRESENTATIVE. SEEDING SHALL BE CLASS 1 LAWN MIXTURE KENTUCKY BLUEGRASS 100 POUNDS PER ACRE, PERENNIAL RYE GRASS 60 POUNDS PER ACRE, CREEPING RED FESCUE 40 POUNDS PER ACRE, AND SPRING OATS 50 POUNDS PER ACRE. MULCH SHALL BE WHEAT STRAW SPREAD AT A RATE OF APPLICATION OF TWO TONS PER ACRE AND COMPLY WITH ARTICLE 251.03, METHOD 2 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
7. ALL AREAS BEYOND THE CONSTRUCTION LIMITS WHICH ARE DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER OR OWNER'S REPRESENTATIVE. A SEED BED PREPARED AND THE AREA MULCHED. THIS WORK SHALL BE INCIDENTAL TO CONSTRUCTION AND WILL NOT BE MEASURED OR PAID FOR SEPARATELY.

DESIGNED:	CB/RM	REVISIONS
DRAFTED:	PE	
CHECKED:	CB/ELC/TBB	
FILE:	2612-51P1	

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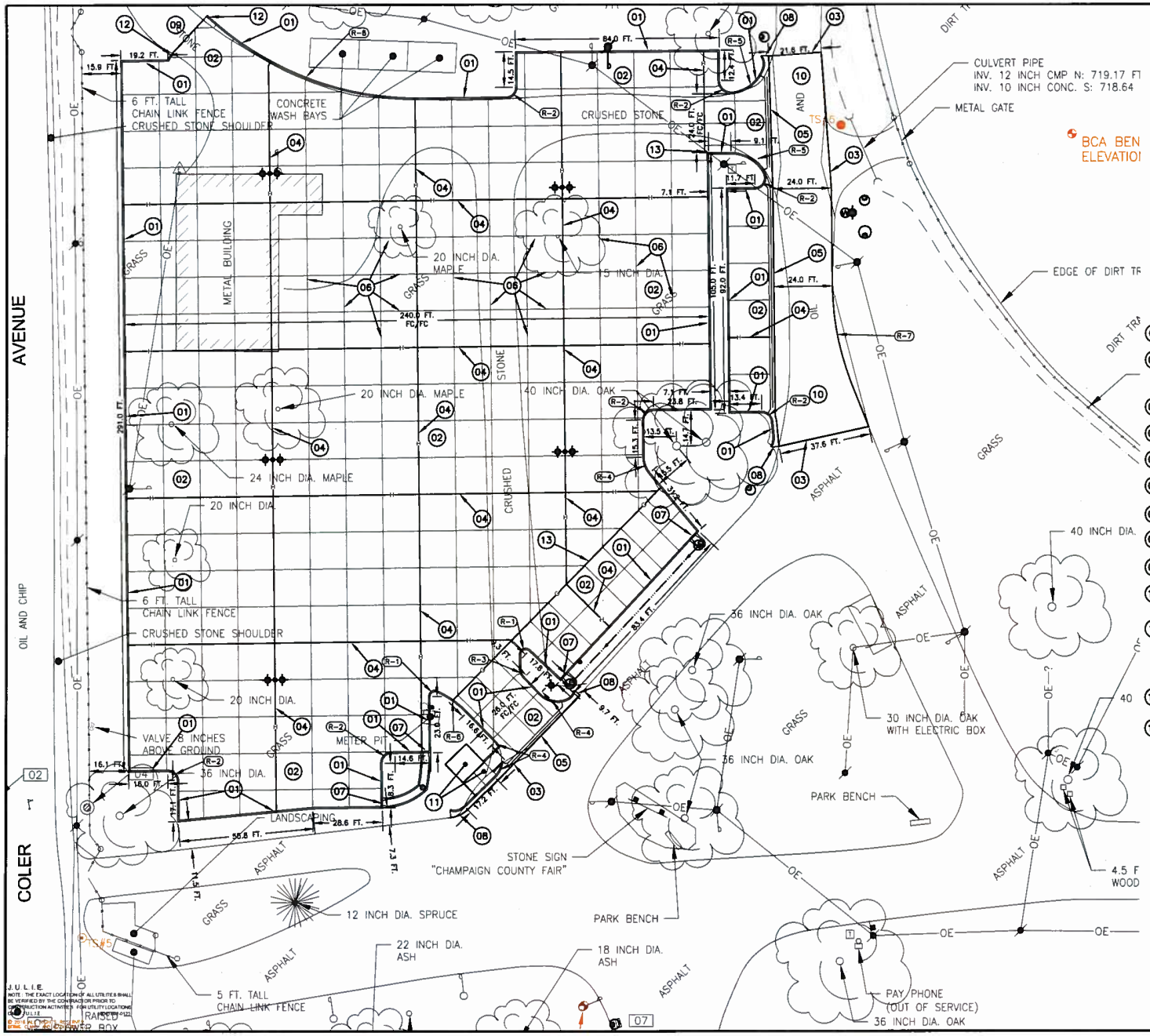
CHAMPAIGN COUNTY, ILLINOIS

SURFACE RESTORATION DETAILS AND NOTES

DATE: 050616
SHEET: 18 OF 27
JOB: 2612-51



N O R T H

20 10 0 20 40

SCALE IN FEET

LEGEND

- PROPOSED STORM MANHOLE/INLET
- PROPOSED DITCH CENTERLINE DIRECTION OF FLOW
- PROPOSED PARKING LOT LIGHT POLE
- (05) KEYED PAVING PLAN NOTE
- (R-1) RADIUS DESIGNATION (RADIUS DIMENSION TO BACK OF CURB) SEE RADIUS SCHEDULE
- PROPOSED CONSTRUCTION JOINT OR SAWED CONTRACTION JOINT – SEE DETAIL SHEET 23
- PROPOSED EXPANSION JOINT OR ISOLATION JOINT – SEE DETAIL SHEET 23

KEYED PAVING PLAN NOTES

(01) CONSTRUCT SNOWPLOWABLE MONOLITHIC PARKING CURB. SEE DETAIL SHEET 21.

(02) REMOVE ALL TOPSOIL AND ORGANIC MATERIALS ENCOUNTERED. CONSTRUCT STANDARD DUTY CONCRETE PAVEMENT CONSISTING OF 6-INCH THICKNESS PORTLAND CEMENT CONCRETE ON 6-INCH THICKNESS CA-6 CRUSHED AGGREGATE LIMESTONE BASE.

(03) MATCH ADJACENT PAVEMENT. PATCH IF DAMAGED BY CONSTRUCTION.

(04) DOWELED EXPANSION JOINT. SEE JOINT TYPE "H" DETAIL ON SHEET 23.

(05) CONSTRUCT 2 FOOT WIDE CONCRETE "VEE" GUTTER. SEE DETAIL SHEET 21.

(06) CONSTRUCTION JOINT OR SAWED CONTRACTION JOINT. SEE JOINT TYPES "A", "D", OR "F" DETAILS ON SHEET 23.

(07) DEPRESS CURB TO PROVIDE DRAINAGE OUTLET. SEE DETAIL SHEET 15. CONSTRUCT CONCRETE DRAINAGE OUTLET. SEE DETAIL SHEET 15.

(08) CONSTRUCT FLARED CURB. SEE DETAIL SHEET 21.

(09) PLACE AND GRADE CRUSHED AGGREGATE AS NEEDED FOR TRANSITION.

(10) REMOVE ALL TOPSOIL AND ORGANIC MATERIALS ENCOUNTERED. CONSTRUCT STANDARD DUTY ASPHALT PAVEMENT. SEE DETAIL SHEET 20.

(11) CONSTRUCT 12 FT. X 10.5 FT. CONCRETE BUS SHELTER PAD AND CONCRETE ACCESSIBLE SIDEWALK/BUS STOP PAVEMENT. COORDINATE TO EXTEND CONDUIT FROM ELECTRIC SERVICE LOCATION TO THE BUS SHELTER PAD AND LIGHTING CIRCUIT CONDUIT TO LIGHT POLES. SEE SHEET E1. COORDINATE WITH CARLE STAFF THAT WILL ERECT THE BUS SHELTER STRUCTURE.

(12) TAPER CURB HEIGHT TO ZERO (0) INCHES IN TWO (2) FEET.

(13) FULL DEPTH PAVEMENT ¾-INCH WIDE ISOLATION JOINT. ONE (1)-INCH WIDE FULL DEPTH ISOLATION JOINT AROUND CONCRETE LIGHT POLE BASES. SEE JOINT TYPE "G" DETAIL ON SHEET 23.

RADIUS SCHEDULE

(DIMENSIONS TO BACK OF CURB) (* – DIMENSION TO EDGE OF PAVEMENT)

RADIUS DESIGNATION	DIMENSION
(R-1)	2 FEET
(R-2)	4 FEET
(R-3)	5 FEET
(R-4)	10 FEET
(R-5)	15 FEET
(R-6)	40 FEET
(R-7)	111 FEET*
(R-8)	97.5 FEET

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REVISIONS			
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FILE:	2612-51P1.DWG		

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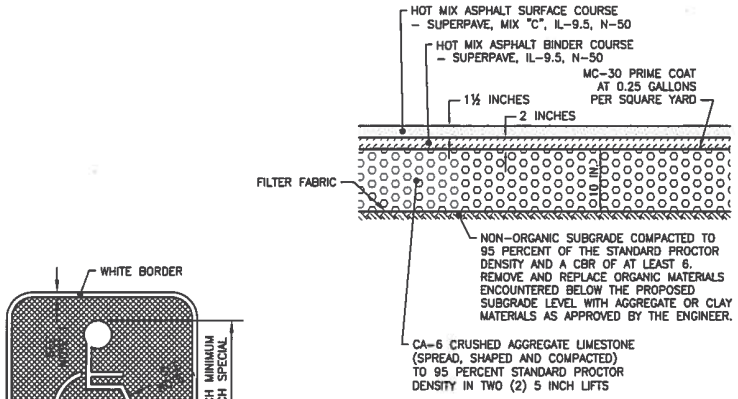
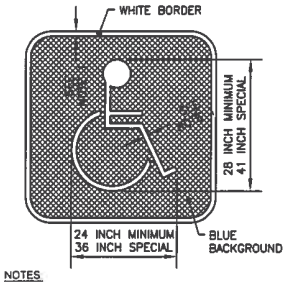
CHAMPAIGN COUNTY, ILLINOIS

PAVING PLAN

DATE: 050616
SHEET: 19 OF 27
JOB: 2612-51



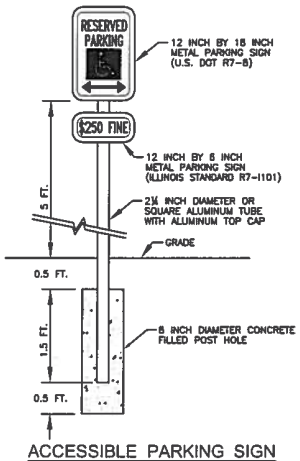
STANDARD DUTY ASPHALT PAVEMENT
NO SCALE



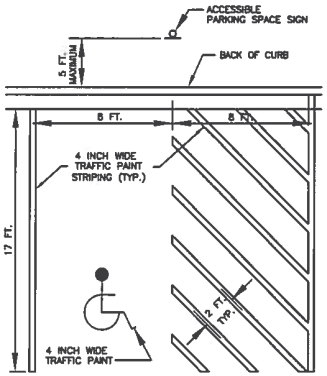
NOTES

1. STRIPE (STROKE) WIDTH OF 3 INCHES MINIMUM, 4 INCHES SPECIAL.
2. SYMBOL COLOR: USE WHITE PAINT FOR ON-STREET AND YELLOW PAINT FOR OFF-STREET.
3. BLUE BACKGROUND AN WHITE BORDER ARE OPTIONAL.

ACCESSIBLE PARKING SYMBOL
NO SCALE



ACCESSIBLE PARKING SIGN
NO SCALE



ACCESSIBLE PARKING SPACE STRIPING
NO SCALE

ASPHALT PAVEMENT NOTES

1. HOT MIX ASPHALT PAVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF SECTIONS 300 AND 400 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", THE NOTES AND DETAILS CONTAINED IN THESE PLANS, AND THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING THE PAVEMENT IN ACCORDING TO THE ALIGNMENT AND GRADES SHOWN ON THE PLANS. SHOULD THE ALIGNMENT OR ELEVATION OF THE PAVEMENT DEVIATE FROM THOSE SHOWN ON THE PLANS AS A RESULT OF INADEQUATE OR IMPROPER CONSTRUCTION TECHNIQUES ON THE PART OF THE CONTRACTOR, AND RESULT IN CONFLICTS WITH UTILITIES OR OTHER OBJECTS THAT WOULD OTHERWISE NOT BE ENCOUNTERED; THE CONTRACTOR WILL BE REQUIRED TO RECTIFY THOSE CONFLICTS AT HIS OWN EXPENSE.
3. AT ALL LOCATIONS WERE PROPOSED HOT MIX ASPHALT PAVEMENT ABUTS EXISTING PAVEMENTS; THE EXISTING PAVEMENT SHALL BE SAWCUT FULL DEPTH ALLOWING A FULL DEPTH SQUARE JOINT BETWEEN PROPOSED AND EXISTING PAVEMENTS.
4. THE SUBGRADE FOR PAVEMENTS SHALL BE PREPARED IN ACCORDANCE WITH SECTION 301 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", THE NOTES AND DETAILS CONTAINED IN THESE PLANS, AND THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS. THE WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICES FOR THE VARIOUS PAVEMENT ITEMS.
5. EXCAVATION SHALL INCLUDE ROUGH GRADING AND SHAPING THE SUBGRADE TO PLUS OR MINUS 0.1 FOOT.
6. ALL STICKS, ROOTS, TOPSOIL, AND ORGANIC MATERIALS SHALL BE REMOVED FROM THE SUBGRADE. ALL SPONGY AREAS IN THE SUBGRADE SHALL BE REMOVED AND REPLACED WITH COMPACTED AGGREGATE OR CLAY MATERIAL SUITABLE TO THE ENGINEER OR OWNER'S REPRESENTATIVE.
7. NEEDED FILL BENEATH PAVEMENTS SHALL BE CLAY FROM ON SITE SOURCES OR CRUSHED STONE AGGREGATE CONFORMING TO CA-6 OR CA-10 GRADATION OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
8. SUBGRADE PREPARATION INCLUDES FINAL GRADING AND SHAPING THE SUBGRADE TO THE LINES AND GRADES SHOWN ON THE PLANS AND COMPACTING THE SUBGRADE TO A MINIMUM OF 95 PERCENT OF THE STANDARD PROCTOR DENSITY. THE SUBGRADE SHALL PROVIDE A MINIMUM CBR VALUE OF SIX (6) IN THE TOP 12 INCHES OF SUBGRADE AS MEASURED BY DYNAMIC CORE PENETROMETER TESTS CONDUCTED ON ALTERNATING LANES ON 100 FOOT INTERVALS. THE CONTRACTOR SHALL ACCOMMODATE THESE TESTS DURING CONSTRUCTION OPERATIONS.
9. PAVEMENT SUBGRADE SHALL HAVE SUFFICIENT STABILITY TO ACCOMMODATE CONSTRUCTION TRAFFIC WITHOUT EXCESSIVE SUBGRADE RUTTING OR SHOVING. THE SUBGRADE SHALL BE TEST ROLLED AND APPROVED IN ACCORDANCE WITH THE FOLLOWING PROCEDURE: TRUCKS SHALL BE LOADED AS FOLLOWS; 27,000 POUNDS ON TWO (2) AXLES AND 45,000 POUNDS ON THREE (3) AXLES WITH THE TOLERANCE NOT TO EXCEED TEN PERCENT (10%). THE TRUCK SHALL MAKE PARALLEL PASSES ALONG EACH LANE OF STREET OR PARKING SUBGRADE AT DISTANCES AS DIRECTED BY THE ENGINEER AND NOT TO EXCEED TEN (10) FEET APART. ANY AREAS WHICH SHOW RUTTING, CRACKING, OR ROLLING OF THE COMPACTED SUBGRADE UPON TEST ROLLING WILL NOT BE ACCEPTED. THE AREAS THAT FAIL SHALL BE RECONSTRUCTED AND TEST ROLLED AGAIN PRIOR TO ACCEPTANCE.
10. AGGREGATE BASE COURSE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 351 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", THE NOTES AND DETAILS CONTAINED IN THESE PLANS, AND THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS. A MINIMUM OF TWO (2) LIFTS SHALL BE PLACED AT A MAXIMUM OF 6 INCHES THICKNESS EACH. THE AGGREGATE BASE COURSE SHALL BE CA-6 OR CA-10, CRUSHED AGGREGATE MATERIALS SHALL BE PLACED TO THE THICKNESS SHOWN IN THE PLANS. THE AGGREGATE BASE SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE STANDARD PROCTOR DENSITY. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICES FOR THE VARIOUS PAVEMENT ITEMS.
11. SEPARATE CURB AND GUTTER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 606 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", THE NOTES AND DETAILS CONTAINED IN THESE PLANS, AND THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS. CURBS PLACED ADJACENT TO HOT MIX ASPHALT PAVEMENTS SHALL HAVE CONTRACTION JOINTS PLACED ON FIFTEEN (15) FOOT MAXIMUM INTERVALS.
12. PRIME COAT ON AGGREGATE BASES SHALL BE MC-30 APPLIED AT A RATE OF 0.25 GALLONS PER SQUIRE YARD. PRIME COAT FOR RIGID BASES (ASPHALT, CONCRETE, BRICK, ETC.) SHALL BE RC-70 APPLIED AT A RATE OF 0.05 GALLONS PER SQUARE YARD.
13. PRIOR TO PLACING HOT MIX ASPHALT, THE AREA BEHIND ADJACENT CURBS SHALL BE BACKFILLED WITH SOIL AND COMPACTED IN MAXIMUM SIX (6) INCH LIFTS TO KEEP CURBS FROM SHIFTING DURING PAVEMENT PLACEMENT.
14. BITUMINOUS MATERIALS MUST BE PRODUCED AT AN ILLINOIS DEPARTMENT OF TRANSPORTATION APPROVED PLANT.
15. HOT MIX ASPHALT BINDER COURSE SHALL BE SUPERPAVE, IL-9.5, N-50. THE HOT MIX ASPHALT SURFACE COURSE SHALL BE SUPERPAVE, MIX "C", IL-9.5, N-50.
16. AN ILLINOIS DEPARTMENT OF TRANSPORTATION APPROVED MIX DESIGN SPECIFICATION SHEET SHALL BE SUBMITTED TO THE ENGINEER AND APPROVED BY THE ENGINEER PRIOR TO USE OF THE HOT MIX ASPHALT FOR PAVEMENT CONSTRUCTION. APPROVAL OF THE MIX DESIGN SHALL IN NO WAY ALLEVIATE THE CONTRACTOR OF ITS DUTY TO SUPPLY MATERIALS MEETING ALL OF THE REQUIREMENTS.
17. THE PAVEMENT THICKNESS SPECIFIED OR SHOWN ON THE PLANS SHALL BE THE MINIMUM ALLOWABLE. PAVEMENTS WITH LESS THAN THE MINIMUM THICKNESS SHALL NOT BE MEASURED FOR PAYMENT.
18. ALL CASTINGS IN PAVEMENT AREAS SHALL BE ADJUSTED FLUSH WITH THE PROPOSED PAVEMENT SURFACE ELEVATION. STORM SEWER MANHOLES AND INLET CASTINGS IN THE PAVEMENT GUTTERS SHALL BE DEPRESSED ½ INCH TO 1 INCH TO AID IN THE DIRECTION OF RUNOFF INTO THE CASTINGS.
19. HOT MIX ASPHALT SURFACE COURSE, SUPERPAVE, MIX "C", N70 SHALL BE PLACED IN LIFTS. EACH LIFT OF MULTIPLE LIFTS SHALL NOT EXCEED TWO (2) INCHES IN THICKNESS.
20. HOT MIX ASPHALT SURFACE COURSES SHALL BE COMPACTED TO AN AVERAGE DENSITY OF 92.0 TO 96.0 PERCENT OF THE THEORETICAL MAXIMUM DENSITY AS DETERMINED BY THE ILLINOIS MODIFIED AASHTO T209. NO INDIVIDUAL TEST SHALL BE BELOW 92.0 PERCENT. HOT MIX ASPHALT BINDER COURSE SHALL BE COMPACTED TO AN AVERAGE DENSITY OF 92.0 TO 96.0 PERCENT OF THE THEORETICAL MAXIMUM DENSITY AS DETERMINED BY THE ILLINOIS MODIFIED AASHTO T209. NO INDIVIDUAL TEST SHALL BE BELOW 92.0 PERCENT.
21. AGGREGATE SURFACE COURSE FOR SHOULDERS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 402 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
22. EXISTING PAVEMENTS AND NEW PAVEMENTS DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE REPLACED BY THE CONTRACTOR AT HIS SOLE EXPENSE AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
23. PAVEMENTS AND CURBS WHICH ARE PLACED AND DO NOT CONFORM TO ALL REQUIREMENTS OF THESE SPECIFICATIONS AND CONTRACT DOCUMENTS WILL BE REJECTED. REJECTED PAVEMENT AND CURBS WILL NOT BE MEASURED FOR PAYMENT.
24. THE CONTRACTOR SHALL PROVIDE HORIZONTAL CONTROL POINTS OF CURVATURE, POINTS OF TANGENCY, RADIUS POINTS, GRADE STAKES FOR PAVEMENT CONSTRUCTION, AND OFFSET STAKES FOR THE BACK OF CURB AS NECESSARY FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF CONTROL POINTS AND GRADE STAKES AND SHALL PAY FOR THE COST OF RESETTING THEM.

JULIE NOTE: THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES. FOR UTILITY LOCATIONS CALL JULIE. (800) 892-0123	DESIGNED: CB/RM	REVISIONS	BERNS, CLANCY AND ASSOCIATES ENGINEERS • SURVEYORS • PLANNERS 406 EAST MAIN STREET - POST OFFICE BOX 6756 URBANA, ILLINOIS 61803-0756 PHONE (217) 384-1144 - FAX (217) 384-3366
	DRAFTED: PE		
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	FILE: 2612-51P1		

Carle

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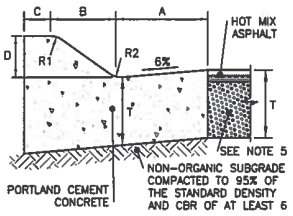
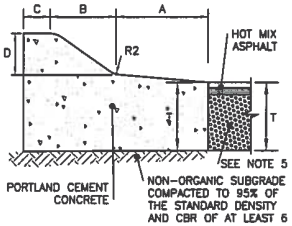
ASPHALT PAVEMENT DETAILS AND NOTES

DATE: 050616
SHEET: 20 OF 27
JOB: 2612-51



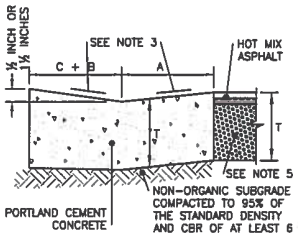
NORMAL SLOPE

(ADJOINING ASPHALT OVER AGGREGATE BASE)



REVERSE SLOPE

(ADJOINING ASPHALT OVER AGGREGATE BASE)



DEPRESSED BARRIER

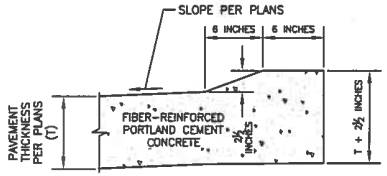
(ADJOINING ASPHALT OVER AGGREGATE BASE)

TYPE "M" PORTLAND CEMENT CONCRETE CURB AND GUTTERS

NO SCALE

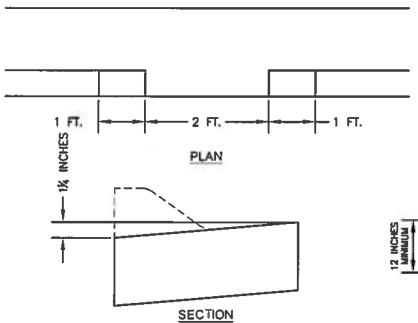
NOTES:

1. "T" IS THE SPECIFIED TOTAL PAVEMENT THICKNESS AS INDICATED ON THE PLANS.
2. PROVIDE TRANSVERSE CONTRACTION JOINTS AT 15 FT. MAXIMUM INTERVALS MATCHING ADJACENT CONCRETE PAVEMENT OR CONCRETE BASE COURSE AND PORTLAND CEMENT CONCRETE SIDEWALK JOINTS EACH SIDE.
3. WHEN DEPRESSED BARRIER CURB IS CONSTRUCTED FOR SIDEWALK RAMPS THE BACK SLOPE OF THE PAN SHALL BE REDUCED TO 8.3% MAXIMUM. THE FRONT SLOPE OF THE PAN SHALL BE REDUCED FROM 6% TO 5%.
4. IF "T" IS GREATER THAN 7 INCHES USE NUMBER 6 DEFORMED TIE BARS DRILLED AND GROUTED AT 30 INCHES ON CENTERS. IF "T" IS LESS THAN 7 INCHES USE NUMBER 4 DEFORMED "L" WITH PRE-FORMED KEYWAY OR DRILLED AND GROUTED TIE BARS ON 30 INCH CENTERS. TIE BARS SHALL BE PLACED MID-DEPTH OF PORTLAND CEMENT CONCRETE
5. CA-6 OR CA-10 CRUSHED STONE SPREAD, SHAPED AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY IN TWO (2) EQUAL LIFTS. SEE PAVEMENT DETAILS FOR SPECIFIC REQUIREMENTS.
6. CONSTRUCTION JOINT WHEN PAVEMENT AND CURB ARE CAST SEPARATELY.



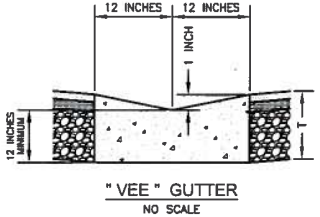
SNOWPLOWABLE MONOLITHIC PARKING CURB

NO SCALE



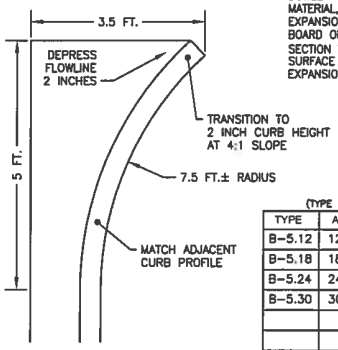
DEPRESSED CURB FOR DRAINAGE OUTLET

NO SCALE



" VEE " GUTTER

NO SCALE



FLARED CURB

NO SCALE

PORTLAND CEMENT CONCRETE CURB NOTES

1. CURB AND GUTTER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 606 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS, AND THE NOTES AND DETAILS CONTAINED IN THESE PLANS.
2. PORTLAND CEMENT CONCRETE FOR CURB CONSTRUCTION SHALL BE A MINIMUM OF SIX (6) BAG MIX, WITH 5 PERCENT (5%) TO 8 PERCENT (8%) ENTRAINED AIR. THE CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH IN FOURTEEN (14) DAYS OF 3,500 P.S.I. THE MAXIMUM SLUMP SHALL BE THREE (3) INCHES.
3. CONTRACTOR SHALL SUBMIT THE PORTLAND CEMENT CONCRETE CURB MIX DESIGN TO THE ENGINEER FOR APPROVAL AT LEAST SEVEN (7) DAYS PRIOR TO CURB CONSTRUCTION. APPROVAL OF THE CURB MIX DESIGN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PROVIDE CONCRETE MEETING ALL APPLICABLE REQUIREMENTS. FAILURE TO MEET THE SPECIFICATIONS SHALL BE CAUSE TO REJECT THE CURB AND GUTTER AND REQUIRE REMOVAL AND REPLACEMENT AT NO COST TO THE OWNER.
4. THE SPECIFIED CURB AND GUTTER MAY BE POURED MONOLITHICALLY WITH PORTLAND CEMENT CONCRETE PAVEMENTS AS LONG AS A SAWCUT JOINT WITH DOWELS AS INDICATED IS CONSTRUCTED. THE CONTRACTOR MAY CONSTRUCT SEPARATE PORTLAND CEMENT CONCRETE CURB AND GUTTER BY A DOWELED CONSTRUCTION JOINT. THE DEPTH OF THE CURB AND GUTTER SHALL MATCH THE ADJACENT PAVEMENT.
5. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING CURBS ACCORDING TO THE ALIGNMENT AND GRADES SHOWN ON THE PLANS. SHOULD THE ALIGNMENT OR ELEVATIONS OF THE CURB DEVIATE FROM THOSE SHOWN ON THE PLANS AS A RESULT OF INADEQUATE OR IMPROPER CONSTRUCTION TECHNIQUES ON THE PART OF THE CONTRACTOR, AND RESULT IN CONFLICTS WITH UTILITIES OR OBJECTS THAT WOULD OTHERWISE NOT BEEN ENCOUNTERED; THE CONTRACTOR WILL BE REQUIRED TO RECTIFY THOSE CONFLICTS AT HIS OWN EXPENSE.
6. ALL STICKS, ROOTS, TOPSOIL AND ORGANIC MATERIALS SHALL BE REMOVED FROM THE SUBGRADE. THE SUBGRADE SHALL BE MECHANICALLY COMPACTED TO 95 PERCENT OF THE STANDARD PROCTOR DENSITY. ALL SPONGY AREAS IN THE SUBGRADE SHALL BE REMOVED AND REPLACED WITH COMPACTED AGGREGATE OR CLAY MATERIAL SUITABLE TO THE ENGINEER OR OWNER'S REPRESENTATIVE.
7. FORMS, STRING AND LASER GRADE CONTROL SHALL BE SET TRUE TO LINE AND GRADE INDICATED ON THE PLANS ND SHALL BE CHECKED BY THE ENGINEER OR OWNER'S REPRESENTATIVE PRIOR TO PLACEMENT OF ANY PORTLAND CEMENT CONCRETE.
8. COAT FORM CONTACT SURFACES WITH FORM-COATING COMPOUND BEFORE PLACING REINFORCEMENT OR TIE BARS. DO NOT ALLOW EXCESS FORM-COATING MATERIAL TO ACCUMULATE IN THE FORMS OR COME IN CONTACT WITH SURFACES WHICH WILL BE BONDED TO FRESH CONCRETE. APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COAT STEEL FORMS WITH NON-STAINING RUST PREVENTATIVE FORM OIL OR OTHERWISE PROTECT AGAINST RUSTING. RUST STAINED STEEL FORM WORK IS NOT ACCEPTABLE. ANY OF THESE REQUIREMENTS SHALL BE CAUSE FOR REJECTION OF THE CONCRETE.
9. ISOLATION JOINTS, EXPANSION JOINTS, CONSTRUCTION JOINTS, AND CONTRACTION JOINTS SHALL BE CONSTRUCTED IN THE LOCATIONS SHOWN IN THE PLANS AND IN ACCORDANCE WITH THE DETAILS FOR EACH JOINT TYPE.
10. EXPANSION JOINTS AND ISOLATION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS. EXPANSION JOINTS SHALL BE PLACED AT THE LOCATIONS INDICATED ON THE PLANS AND AT ALL CHANGES IN CURB DIRECTION, POINTS OF CURVATURE AND POINTS OF TANGENCY. EXPANSION JOINTS SHALL BE CONSTRUCTED OF ¾ INCH EXPANSION MATERIAL PLACED FULL DEPTH THROUGH THE PAVEMENT AND DEPRESSED ½ INCHES FROM THE SURFACE WITH 12 INCH LONG DOWELS ON 12 INCH CENTERS PLACED AT MID-DEPTH IN THE PORTLAND CEMENT CONCRETE PAVEMENT. DOWEL CAPS SHALL BE PROVIDED ON ONE END OF THE DOWEL AND COATED WITH AN APPROVED HEAVY GREASE. ABOVE THE EXPANSION MATERIAL, THE JOINT SHALL BE FILLED WITH AN APPROVED JOINT SEALANT. EXPANSION MATERIAL SHALL BE PRE-FORMED BITUMINOUS IMPREGNATED FIBER BOARD OF THE INDICATED THICKNESS AND SHALL CONFORM TO THE CURB CROSS SECTION WITH A ¾ INCH DEPRESSION WITH BACKER ROD OR BOND BREAKER AT THE SURFACE FOR JOINT SEALANT. ISOLATION JOINTS SHALL BE CONSTRUCTED AS EXPANSION JOINTS EXCEPT WITHOUT DOWELS.
11. DOWEL BARS SHALL BE PLAIN ROUND BILLET-STEEL BARS MEETING THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR BILLET-STEEL CONCRETE REINFORCEMENT BAR", ASTM DESIGNATION A-15. THE FINISHED BARS SHALL BE FREE FROM BURRS OR OUT-OF-ROUND ENDS WHICH WOULD PREVENT EASY SLIPPAGE IN THE DOWEL CAPS. ALL EXPOSED BAR SURFACE OUTSIDE OF THE CAP ON THE SLIPPAGE SIDE SHALL BE FULLY COATED WITH GREASE.
12. CONTRACTION JOINTS SHALL BE CONSTRUCTED AND LOCATED IN ACCORDANCE WITH THE NOTES AND DETAILS SHOWN IN THE PLANS. CURB TRANSVERSE JOINTS (CONTRACTION JOINTS) SHALL BE PLACED AT A MAXIMUM OF 12 FOOT INTERVALS FOR ADJACENT BITUMINOUS PAVEMENT OR SHALL BE PLACED TO COINCIDE WITH ADJACENT PORTLAND CEMENT CONCRETE PAVEMENT JOINTS AND NOT EXCEEDING A MAXIMUM OF 15 FOOT INTERVALS. CONTRACTION JOINTS SHALL BE 2 INCH DEEP SAWCUTS MADE WITH A ¼ INCH WIDE CONVENTIONAL BLADE WITHIN EIGHT (8) HOURS OF CONCRETE PLACEMENT.
13. CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS AND SHALL BE LOCATED COINCIDENT WITH PLANNED LOCATIONS OF CONTRACTION JOINTS. PARTIAL SLABS WILL NOT BE ALLOWED. CONSTRUCTION JOINTS SHALL BE USED BETWEEN ADJACENT POURS. NUMBER 4 REBAR, 30 INCHES LONG ON 30 INCH CENTERS SHALL BE PLACED AT MID-DEPTH OF THE PAVEMENT. THE CONCRETE POURS SHALL EACH BE EDGED TO MATCH A 1 INCH DEEP JOINTER OR SHALL BE SAWED WITH A ¼ INCH WIDE CONVENTIONAL BLADE WITHIN EIGHT (8) HOURS OF PLACEMENT OF ADJACENT POUR. ALL CONSTRUCTION JOINTS SHALL BE FILLED WITH AN APPROVED JOINT SEALANT.
14. CONTRACTOR SHALL MOISTEN THE SUBGRADE BEFORE PLACING CONCRETE.
15. ALL CONCRETE USED FOR CURB CONSTRUCTION SHALL BE MECHANICALLY VIBRATED AT TIME OF PLACEMENT FOR CONSOLIDATION AND TO REMOVE VOIDS AND AIR POCKETS.
16. CURBS SHALL BE CONSTRUCTED USING A CURB FORM OR MULE OF THE REQUIRED CROSS SECTION. HAND FORMED (DARBYING) CURB WILL NOT BE ACCEPTED.
17. ALL BACK OF CURBS, GUTTER EDGES, END OF CURBS THAT ABUT BITUMINOUS EXPANSION MATERIAL OR FORMS SHALL BE EDGED WITH A ¼ INCH RADIUS EDGER. CONCRETE THAT ABUTS OTHER CURB OR IS "SLIP-FORMED" WITHOUT THE USE OF FORMS NEED NOT BE EDGED.
18. WATER SHALL NOT BE ADDED TO THE SURFACE OF THE CONCRETE FOR FINISHING PURPOSES.
19. CURBS POURED SEPARATELY FROM PAVEMENT SHALL HAVE A HEAVY BROOMED FINISH PARALLEL TO THE DIRECTION OF GUTTER FLOW. CURBS POURED MONOLITHICALLY SHALL HAVE A HEAVY BROOMED FINISH TRANSVERSE TO THE DIRECTION OF TRAVEL SIMILAR TO THE ADJACENT PAVEMENT.
20. CURBS SHALL BE CURED USING POLYETHYLENE FILM OR AN APPROVED CURING COMPOUND APPLIED UNIFORMLY TO ALL EXPOSED CURB SURFACES, INCLUDING THE BACK OF CURB DURING SLIP FORMING. CURBS SHALL BE PROVIDED WITH HOT OR COLD WEATHER PROTECTION WHEN WARRANTED BY WEATHER CONDITIONS AND AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
21. FORMS SHALL NOT BE REMOVED FOR 24 HOURS. CARE SHALL BE EXERCISED WHEN REMOVING FORMS SO CONCRETE EDGES ARE NOT CRACKED, CHIPPED OR DAMAGED. AFTER FORMS ARE REMOVED, ALL VISIBLE VOIDS AND HONEYCOMBS ¾ INCH IN DIAMETER OR LARGER SHALL BE FILLED IN WITH MORTAR OR GROUT AND BRUSHED SMOOTH IMMEDIATELY AFTER FORM REMOVAL.
22. JOINT SEALANT SHALL BE SONOLASTIC NP1 JOINT FILLER MANUFACTURED BY SONNEBORN. JOINTS SHALL BE SEALED TO WITHIN ½ INCH OF THE FINISHED SURFACE.
23. THE CONTRACTOR IS REQUIRED TO PROTECT EXISTING PORTLAND CEMENT CONCRETE AND BITUMINOUS SURFACES FROM DAMAGE DURING CONSTRUCTION OPERATIONS. TRAFFIC, INCLUDING CONSTRUCTION EQUIPMENT, SHALL NOT BE ALLOWED TO OPERATE ATOP OR OVER CURBS. VIBRATING SCREEDS SHALL NOT RUN ON THE EDGE OF NEW CURBS UNTIL CONCRETE HAS CURED AT LEAST 36 HOURS. EXISTING CONCRETE AND NEW CONCRETE DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
24. ALL CURBS SHALL BE INSPECTED FOR VOIDS PRIOR TO PLACEMENT OF BACKFILL AND/OR PAVEMENT. VOIDS SHALL BE FILLED WITH GROUT AND RUBBED SMOOTH.
25. THE AREAS ADJACENT TO THE CURBS SHALL BE CLEANED UP, BACKFILLED, AND GRADED AS SOON AS POSSIBLE AFTER CURB CONSTRUCTION.
26. CURBS WHICH ARE POURED AND DO NOT CONFORM TO ALL THE REQUIREMENTS OF THESE SPECIFICATIONS AND CONTRACT DOCUMENTS WILL BE REJECTED. REJECTED CURB WILL NOT BE MEASURED FOR PAYMENT.

TABLE OF DIMENSIONS

(TYPE "B" CURB AND GUTTERS)

TYPE	A	B	C	D	R1	R2
B-5.12	12	1	5	5	1	3
B-5.18	18	1	5	5	1	3
B-5.24	24	1	5	5	1	3
B-5.30	30	1	5	5	1	3

(MOUNTABLE CURBS)

TYPE	A	B	C	D	R1	R2
M-3.12	12	3.5	3.5	3	3	2
M-3.18	18	3.5	3.5	3	3	2
M-3.24	24	3.5	3.5	3	3	2
M-4.12	12	4	3	4	3	2
M-4.18	18	4	3	4	3	2
M-4.24	24	4	3	4	3	2

NOTE: DIMENSIONS SHOWN ARE IN INCHES

J.U.L.I.E.
NOTE: THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES. FOR UTILITY LOCATIONS CALL JULIE. (800) 892-0123

DESIGNED:	CB/RM	REVISIONS
DRAFTED:	PE	
CHECKED:	CB/ELC/TBB	
FILE:	2612-51P1	

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CHAMPAIGN COUNTY, ILLINOIS

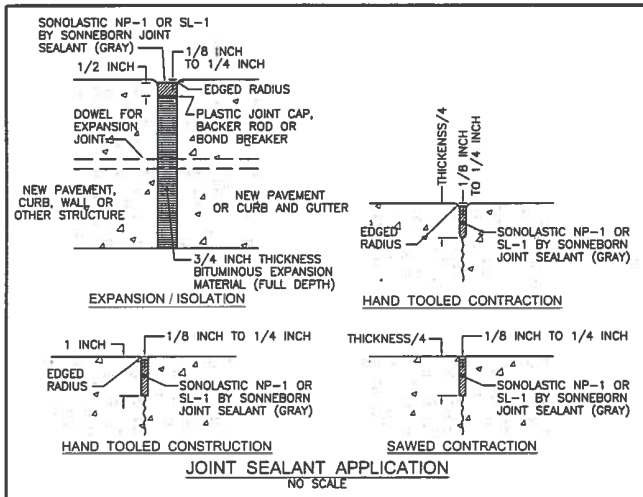
PORTLAND CEMENT CONCRETE MOUNTABLE CURB DETAILS AND NOTES

DATE: 050616
SHEET: 21 OF 27
JOB: 2612-51

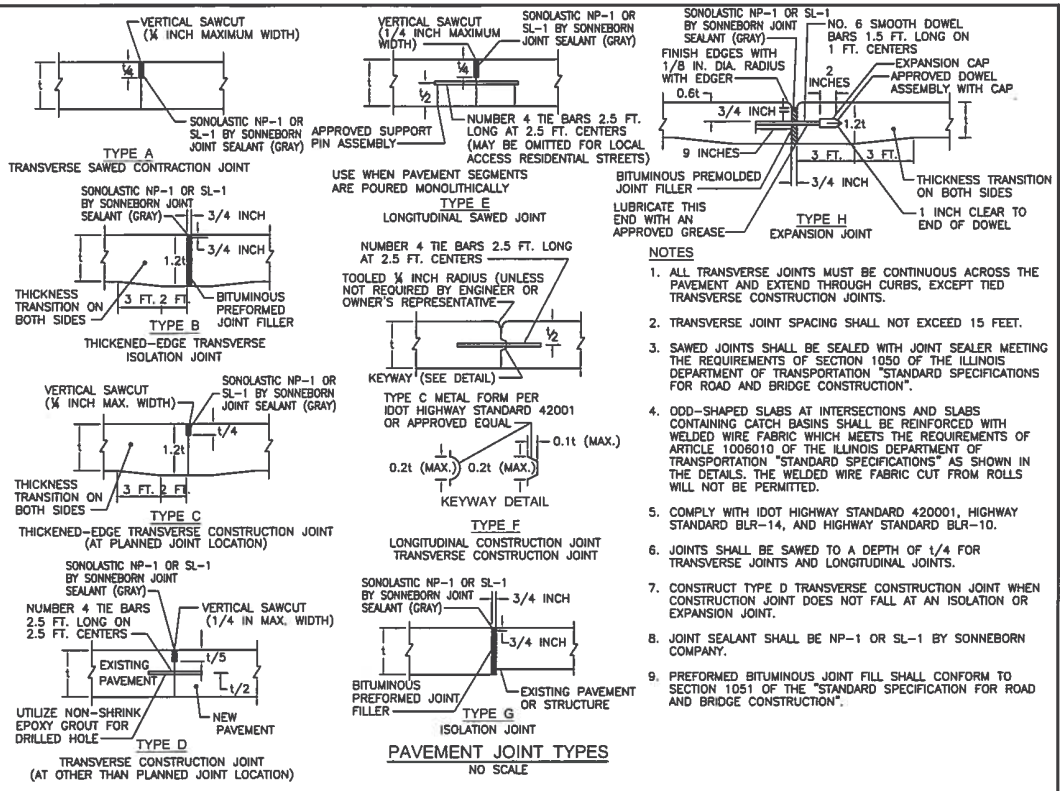
PORTLAND CEMENT CONCRETE PAVEMENT NOTES

1. PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 420 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS, AND THE CONCRETE PAVEMENT CONSTRUCTION NOTES AND DETAILS CONTAINED IN THESE PLANS. ALL WORK INCLUDING SUBGRADE PREPARATION, JOINTING, FINISHING, BROOMING, AND CURING SHALL BE INCLUDED AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR PORTLAND CONCRETE PAVEMENT.
2. THE SUBGRADE FOR PAVEMENTS SHALL BE PREPARED IN ACCORDANCE WITH SECTION 301 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", NOTES AND DETAILS CONTAINED IN THESE PLANS, AND THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE FOR THE VARIOUS PAVEMENT ITEMS.
3. SEPARATE CURB AND GUTTER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 606 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND TO THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS, AND THE NOTES AND DETAILS CONTAINED IN THESE PLANS. THE SPECIFIED CURB AND GUTTER MAY BE POURED MONOLITHICALLY WITH PORTLAND CEMENT CONCRETE PAVEMENTS AS LONG AS A SAWCUT JOINT WITH DOWELS AS INDICATED ARE CONSTRUCTED. THE CONTRACTOR MAY CONSTRUCT SEPARATE PORTLAND CEMENT CONCRETE CURB AND GUTTER AS LONG AS IT IS TIED TO THE ADJACENT PORTLAND CEMENT CONCRETE PAVEMENT BY A DOWELED CONSTRUCTION JOINT. THE DEPTH OF THE CURB AND GUTTER SHALL MATCH THE ADJACENT PAVEMENT.
4. PORTLAND CEMENT CONCRETE SHALL BE A MINIMUM OF SIX (6) BAG MIX, WITH FIVE PERCENT (5%) TO EIGHT PERCENT (8%) ENTRAINED AIR. THE CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH IN FOURTEEN (14) DAYS OF 3,500 P.S.I. THE MAXIMUM SLUMP SHALL BE THREE (3) INCHES. FAILURE TO MEET ANY OF THESE REQUIREMENTS SHALL BE CAUSE FOR REJECTION OF THE CONCRETE.
5. PORTLAND CEMENT CONCRETE FOR ALL PAVEMENTS SHALL CONTAIN 1.5 POUNDS PER CUBIC YARD OF POLYPROPYLENE FIBER REINFORCEMENT MATERIAL INCORPORATED AT THE BATCH PLANT AND THOROUGHLY MIXED THROUGHOUT THE CONCRETE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. FIBER REINFORCEMENT SHALL NOT BE REQUIRED FOR CURBS OR SIDEWALKS.
6. PORTLAND CEMENT CONCRETE MIX DESIGN AND PRIOR TEST PERFORMANCE REPORTS FOR THE MIX DESIGN, SHALL BE SUBMITTED TO THE ENGINEER OR OWNER'S REPRESENTATIVE FOR APPROVAL AT LEAST SEVEN (7) DAYS PRIOR PAVEMENT CONSTRUCTION AND PRIOR TO APPROVAL BY THE ENGINEER OR OWNER'S REPRESENTATIVE. APPROVAL OF THE MIX DESIGN DOES NOT RELIEVE THE CONTRACTOR OF HIS DUTY TO PROVIDE CONCRETE MEETING ALL APPLICABLE REQUIREMENTS.
7. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING THE PAVEMENT ACCORDING TO THE ALIGNMENT AND GRADES SHOWN ON THE PLANS. SHOULD THE ALIGNMENT OR ELEVATIONS OF THE PAVEMENT DEVIATE FROM THOSE SHOWN ON THE PLANS AS A RESULT OF INADEQUATE OR IMPROPER CONSTRUCTION TECHNIQUES AND RESULT IN CONFLICT WITH UTILITIES OR OBJECTS THAT WOULD OTHERWISE NOT BE ENCOUNTERED; THE CONTRACTOR WILL BE REQUIRED TO RECTIFY THOSE CONFLICTS AT HIS OWN EXPENSE.
8. ALL STICKS, ROOTS, TOPSOIL, AND ORGANIC MATERIALS SHALL BE REMOVED FROM THE SUBGRADE. ALL SPONGY AREAS IN THE SUBGRADE SHALL BE REMOVED AND REPLACED WITH COMPACTED AGGREGATE OR CLAY MATERIAL SUITABLE TO THE ENGINEER OR OWNER'S REPRESENTATIVE.
9. THE CONTRACTOR SHALL DISPOSE OF ALL EXCESS EXCAVATED MATERIALS OFF SITE OR AT THE SITE AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
10. NEEDED FILL BENEATH PAVEMENTS SHALL BE CLAY FROM ON SITE SOURCES OR CRUSHED STONE AGGREGATE CONFORMING TO CA-6 OR CA-10 GRADATION OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
11. THE SUBGRADE SHALL BE MECHANICALLY COMPACTED TO 95 PERCENT OF THE STANDARD PROCTOR DENSITY. THE PAVEMENT SUBGRADE SHALL HAVE SUFFICIENT STABILITY TO ACCOMMODATE CONSTRUCTION TRAFFIC WITHOUT EXCESSIVE SUBGRADE RUTTING OR SHOVING. AT THE TIME OF PLACEMENT OF PAVEMENT, THE IN-SITU SUBGRADE SHALL HAVE A CALIFORNIA BEARING RATIO (CBR) OF AT LEAST SIX (6) IN THE TOP TWELVE (12) INCHES OF SUBGRADE. THE CBR VALUE WILL BE ASCERTAINED BY THE CONTRACTOR BY USE OF THE DYNAMIC CONE PENETROMETER (DCP) WITH ONE TEST EVERY 250 SQUARE YARDS OF PAVEMENT OR 100 FEET OF ROADWAY WITH TESTS ALTERNATING BETWEEN TRAFFIC LANES. THE CONTRACTOR SHALL COORDINATE AND ACCOMMODATE THESE TESTS DURING THE CONSTRUCTION OPERATIONS.
12. THE SUBGRADE SHALL BE TEST ROLLED AND APPROVED IN ACCORDANCE WITH THE FOLLOWING PROCEDURE. TRUCKS SHALL BE LOADED AS FOLLOWS: 27,000 POUNDS ON TWO (2) AXLES OR 45,000 POUNDS ON THREE (3) AXLES WITH THE TOLERANCE NOT TO EXCEED TEN PERCENT (10%). THE TRUCK SHALL MAKE PARALLEL PASSES ALONG EACH LANE OF STREET OR PARKING SUBGRADE AT DISTANCES AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE AND NOT TO EXCEED TEN (10) FEET APART. ANY AREAS WHICH SHOW RUTTING, CRACKING, OR ROLLING OF THE COMPACTED SUBGRADE UPON TEST ROLLING WILL NOT BE ACCEPTED. THE AREAS THAT FAIL SHALL BE RECONSTRUCTED BY THE CONTRACTOR AND TEST ROLLED AGAIN PRIOR TO ACCEPTANCE.
13. FORMS WHEN USED, SHALL BE SET TRUE TO LINE AND GRADE AND SHALL BE CHECKED BY HE ENGINEER OR OWNER'S REPRESENTATIVE PRIOR TO PLACEMENT OF CONCRETE. GRADES ARE CRITICAL TO ENSURE PROPER DRAINAGE. IF THE ELEVATION OF ANY PORTLAND CEMENT CONCRETE IMPROVEMENT VARIES FROM THAT SHOWN ON THE PLANS OR STAKED BY THE ENGINEER BY MORE THAN FOUR-HUNDREDTHS (0.04) OF A FOOT, OR IF AN AREA IS NOT PROPERLY DRAINED. THE CONTRACTOR SHALL REMOVE AND REPLACE SUFFICIENT PAVEMENT TO CORRECT THE DEFECT AT HIS OWN EXPENSE.
14. THE PAVEMENT THICKNESS SPECIFIED OR SHOWN ON THE DRAWINGS SHALL BE THE MINIMUM ALLOWABLE. PAVEMENT WITH LESS THAN THE MINIMUM THICKNESS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
15. THE CONTRACTOR SHALL COAT FORM CONTACT SURFACES WITH FORM COATING COMPOUND BEFORE PLACING REINFORCEMENT OR TIE BARS. DO NOT ALLOW EXCESS FORM COATING MATERIAL TO ACCUMULATE IN THE FORMS OR COME INTO CONTACT WITH SURFACES WHICH WILL BE BONDED TO FRESH CONCRETE. APPLY IN ACCORDANCE WITH MANUFACTURE'S INSTRUCTIONS. COAT STEEL FORMS WITH NONSTAINING RUST PREVENTATIVE FORM OIL OTHERWISE PROTECT AGAINST RUSTING. RUST STAINED STEEL FORMWORK IS NOT ACCEPTABLE.
16. NEW PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE JOINED TO EXISTING PAVEMENTS WITH 30 INCH LONG STEEL NUMBER FOUR (4) REBAR AT 30 INCH CENTERS, DRILLED NINE (9) INCHES AND EPOXY GROUTED INTO THE EXISTING PAVEMENT WITH "REDHEADS" OR WITH "J-BOLTS". EPOXY GROUTING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 584 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION". "REDHEADS" AND "J-BOLTS" SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PAVEMENT CONSTRUCTION AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
17. ISOLATION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS. ISOLATION JOINTS MAY BE LOCATED BETWEEN A NEW PAVEMENT AND EXISTING PAVEMENT, CURB OR OTHER STRUCTURES AS SHOWN ON THE PLANS. ISOLATION JOINTS SHALL BE CONSTRUCTED OF ¾ INCH EXPANSION MATERIAL WITH ½ INCH THICKNESS JOINT SEALANT.
18. EXPANSION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS. EXPANSION JOINTS SHALL BE PLACED AT THE LOCATIONS SHOWN ON THE PLANS. EXPANSION JOINTS SHALL BE CONSTRUCTED OF ¾ INCH EXPANSION MATERIAL PLACED FULL DEPTH THROUGH THE PAVEMENT AND DEPRESSED ¾ INCH FROM THE SURFACE WITH EIGHTEEN (18) INCH LONG DOWELS ON TWELVE (12) INCH CENTERS PLACED AT MID-DEPTH IN THE PAVEMENT. DOWEL CAPS SHALL BE PROVIDED ON ONE END OF THE DOWEL AND THE DOWELS SHALL BE COATED WITH AN APPROVED HEAVY GREASE. THE SPACE ABOVE THE EXPANSION MATERIAL, THE JOINT SHALL BE FILLED WITH JOINT SEALANT.
19. CONSTRUCTION JOINTS SHALL BE CONSTRUCTED AND LOCATED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS. CONSTRUCTION JOINTS SHALL BE USED BETWEEN POURS. NUMBER FOUR (4) REBARS, THIRTY (30) INCHES LONG ON THIRTY (30) INCH CENTERS SHALL BE PLACED AT MID-DEPTH OF THE PAVEMENT. THE CONCRETE POURS SHALL BE EDGED TO MATCH A ONE (1) INCH DEEP JOINTER AND FILLED WITH JOINT SEALANT OR SHALL BE SAWED TWO (2) INCHES DEEP OR AS INDICATED ON THE APPROPRIATE DETAIL AND FILLED WITH JOINT SEALANT.
20. CONTRACTION JOINTS SHALL BE CONSTRUCTED AND LOCATED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS. CONTRACTION JOINTS SHALL BE TWO (2) INCH DEEP SAWCUTS OR HAND TOOLED JOINTS MADE WITH AN ONE (1) INCH DEEP JOINTER. THE JOINTS SHALL BE FILLED WITH JOINT SEALANT.
21. CONVENTIONAL SAWCUTS SHALL BE MADE WITHIN EIGHT (8) HOURS OF THE PLACEMENT OF THE CONCRETE EXCEPT THAT "SOFF-CUT" SAWING MUST BE COMPLETED WHEN THE CONCRETE IS "GREEN" AND AS SOON AS IT IS ABLE TO SUPPORT THE EQUIPMENT..
22. AS AN ALTERNATIVE TO CONVENTIONAL SAW CUTTING, CONTRACTION AND CONSTRUCTION JOINTS MAY BE "SOFF-CUT" AS SOON AS THE CONCRETE HAS HARDENED ENOUGH TO WALK ON. THIS SHALL BE DONE WITH A "SOFF-CUT" SAW AS MANUFACTURED BY SOFF-CUT INTERNATIONAL, INCORPORATION. FOR PAVEMENTS UP TO NINE (9) INCHES IN THICKNESS A MINIMUM OF ONE (1) INCH DEPTH SAWCUT SHALL BE MADE. FOR PAVEMENTS GREATER THAN NINE (9) INCHES IN THICKNESS A MINIMUM ⅓ DEPTH SAWCUT SHALL BE REQUIRED.
23. EXPANSION MATERIAL SHALL BE NATURAL GRAY HOMEX 300 MANUFACTURED BY THE HOMOSITE COMPANY OR AN APPROVED EQUAL. IF BITUMINOUS MATERIALS ARE USED FOR THE EXPANSION MATERIAL, A BOND BREAKER OR JOINT CAP MUST BE USED WHERE JOINT SEALENT IS SPECIFIED.
24. DOWEL BARS SHALL BE PLAIN ROUND BILLET-STEEL BARS MEETING THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR BILLET-STEEL CONCRETE REINFORCEMENT BARS", ASTM DESIGNATION A-15. THE FINISHED BARS SHALL BE FREE FROM BURRS OR OUT OF ROUND ENDS WHICH WOULD PREVENT EASY SLIPPAGE IN THE DOWEL BAR CAPS.
25. JOINT SEALANT SHALL BE SONOLASTIC NP-1 OR SONOLASTIC SL-1 JOINT FILLER MANUFACTURED BY SONNEBORN. JOINTS SHALL BE SEALED TO WITHIN ONE-EIGHTH (⅛) INCH OF THE SURFACE.
26. CONCRETE POURS SHALL BE ENDED AT CONSTRUCTION, ISOLATION, EXPANSION, OR CONTRACTION JOINTS AS INDICATED ON THE PLANS. PARTIAL SLABS SHALL NOT BE ALLOWED. FOR POURS ENDED AT CONTRACTION JOINTS THE JOINT SHALL BE CONSTRUCTED AS A CONSTRUCTION JOINT.
27. ALL CASTINGS IN PAVEMENT AREAS SHALL BE ADJUSTED FLUSH WITH THE PROPOSED PAVEMENT SURFACE ELEVATION. STORM SEWER MANHOLE AND INLET CASTINGS IN THE PAVEMENT GUTTERS SHALL BE DEPRESSED ONE-HALF (½) INCH OR AS APPROPRIATE TO AID IN DIRECTING RUNOFF INTO THE CASTING. THE CONCRETE PAVEMENT ADJACENT TO ALL CASTINGS SHALL BE EDGED WITH A ONE-QUARTER (¼) INCH RADIUS EDGER.
28. THE CONTRACTOR SHALL MOISTEN THE SUBGRADE BEFORE PLACING CONCRETE PAVEMENTS.
29. ALL CONCRETE USED FOR PAVEMENT CONSTRUCTION SHALL BE VIBRATED WITH A MECHANICAL CONCRETE VIBRATOR FOR CONSOLIDATION TO REMOVE VOIDS AND AIR POCKETS.
30. PAVEMENT SHALL BE FINISHED WITH A FINISHING MACHINE APPROVED BY THE ENGINEER OR OWNER'S REPRESENTATIVE. THE MACHINE SHALL BE SELF-PROPELLED, CAPABLE OF STRIKING OFF, CONSOLIDATING, AND FINISHING THE CONCRETE OF THE CONSISTANCY REQUIRED TO THE PROPER CROWN AND GRADE, OR OTHER METHOD APPROVED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
31. WATER SHALL NOT BE ADDED TO THE SURFACE OF THE CONCRETE FOR FINISHING PURPOSES. PAVEMENTS SHALL HAVE A HEAVY BROOMED FINISH TRANSVERSE TO THE DIRECTION OF TRAVEL.
32. ALL BACK OF CURBS, GUTTER EDGES, ENDS OF PAVEMENT SLABS AND PAVEMENTS THAT ABUT BITUMINOUS EXPANSION MATERIAL OR FORMS SHALL BE EDGED WITH A ONE-QUARTER (¼) INCH RADIUS EDGER. CONCRETE THAT ABUTS OTHER PAVEMENT OR IS "SLIP FORMED" WITHOUT THE USE OF FORMS NEED NOT BE EDGED.
33. PAVEMENTS AND CURBS SHALL BE CURED USING POLYETHYLENE FILM OR A CURING COMPOUND APPLIED UNIFORMLY TO ALL EXPOSED SURFACES INCLUDING THE BACK OF CURBS DURING SLIP FORMING. PAVEMENTS SHALL BE PROTECTED FROM HOT AND COLD WEATHER WHEN WARRANTED BY WEATHER CONDITIONS IN ACCORDANCE WITH ARTICLE 1020.13 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
34. THE CONTRACTOR IS REQUIRED TO PROTECT EXISTING PORTLAND CEMENT CONCRETE SURFACES FROM DAMAGE IMMEDIATELY AFTER BEING POURED AND DURING THE CONSTRUCTION OPERATIONS. EXISTING CONCRETE AND NEW CONCRETE DAMAGED BY CONSTRUCTION OERATIONS OR BY DEFACING THE CONCRETE SURFACE BEFORE FINAL SET SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
35. FORMS SHALL NOT BE REMOVED FOR 24 HOURS AFTER CONCRETE PLACEMENT. CARE SHOULD BE EXERCISED WHEN REMOVING THE FORMS SO CONCRETE EDGES ARE NOT CRACKED OR DAMAGED. AFTER FORMS ARE REMOVED, ALL VISIBLE VOIDS AND HONEYCOMBS OF THREE-QUARTER (¾) INCH IN DIAMETER OR LARGER SHALL BE FILLED IN WITH MORTAR OR GROUT AND BRUSHED SMOOTH IMMEDIATELY AFTER FORM REMOVAL.
36. VIBRATING SCREEDS SHALL NOT RUN ON THE EDGE OF NEW PAVEMENTS UNTIL CONCRETE HAS CURED AT LEAST 72 HOURS.
37. TRAFFIC, INCLUDING CONSTRUCTION EQUIPMENT, SHALL NOT BE ALLOWED ON PAVEMENTS FOR AT LEAST SEVEN (7) DAYS.
38. THE AREA ADJACENT TO THE PAVEMENT SHALL BE CLEANED UP, BACKFILLED, AND GRADED AS SOON AS POSSIBLE AFTER PAVEMENT CONSTRUCTION.
39. PAVEMENTS AND CURBS WHICH ARE POURED AND DO NOT CONFORM TO ALL REQUIREMENTS OF THESE SPECIFICATIONS AND CONTRACT DOCUMENTS WILL BE REJECTED. REJECTED PAVEMENT AND CURB WILL NOT BE MEASURED FOR PAYMENT.
40. ODD SHAPED SLABS AT INTERSECTIONS AND SLABS CONTAINING CATCH BASINS SHALL BE REINFORCED WITH WELDED WIRE FABRIC WHICH MEETS THE REQUIREMENTS OF ARTICLE 1006.10 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", AND AS SHOWN ON THE DETAILS. THE WELDED WIRE FABRIC SHALL BE IN SHEETS AND NOT ROLLS.
41. CONCRETE PAVEMENTS SHALL HAVE A SOLAR REFLECTANCE INDEX (SRI) VALUE OF AT LEAST 29 WHEN MEASURED IN ACCORDANCE TO ASTM E903 OR ASTM C1549.
42. CONTRACTOR SHALL SECURE AND PAY FOR THE SERVICES OF A SUBGRADE COMPACTING AND CONCRETE TESTING FIRM AND SHALL SUBMIT TEST REPORTS TO THE ENGINEER. MATERIALS NOT MEETING THE REQUIREMENTS OF THESE SPECIFICATIONS WILL BE CORRECTED OR REMOVED AND REPLACED.
43. THE ENGINEER WILL PROVIDE HORIZONTAL CONTROL FOR POINTS OF CURVATURE, POINTS OF TANGENCY, RADIUS POINTS, GRADE STAKES FOR PAVEMENT CONSTRUCTION AND OFFSET STAKES FOR THE BACK OF CURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF CONTROL POINTS AND GRADE STATES AND SHALL PAY FOR THE COST OF RESETTING THEM.

J.U.L.I.E. NOTE: THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES. FOR UTILITY LOCATIONS CALL JULIE. (800) 892-0123	DESIGNED: CB/RM	REVISIONS	BERNS, CLANCY AND ASSOCIATES ENGINEERS • SURVEYORS • PLANNERS 406 EAST MAIN STREET - POST OFFICE BOX 0756 URBANA, ILLINOIS 61803-0756 PHONE (217) 384-1144 - FAX (217) 384-3355	CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS PARKING LOT IMPROVEMENT SITE URBANA TOWNSHIP, CHAMPAIGN COUNTY, ILLINOIS	PORTLAND CEMENT CONCRETE PAVEMENT DETAILS AND NOTES	DATE: 050616
	DRAFTED: PE					SHEET: 22 OF 27
	CHECKED: CB/ELC/TBB					JOB: 2612-51
	FILE: 2612-51P1					



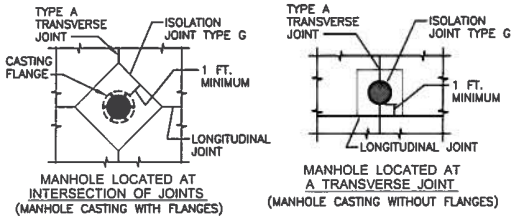
JOINT SEALANT APPLICATION
NO SCALE



NOTES

1. ALL TRANSVERSE JOINTS MUST BE CONTINUOUS ACROSS THE PAVEMENT AND EXTEND THROUGH CURBS, EXCEPT TIED TRANSVERSE CONSTRUCTION JOINTS.
2. TRANSVERSE JOINT SPACING SHALL NOT EXCEED 15 FEET.
3. SAWED JOINTS SHALL BE SEALED WITH JOINT SEALER MEETING THE REQUIREMENTS OF SECTION 1050 OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
4. ODD-SHAPED SLABS AT INTERSECTIONS AND SLABS CONTAINING CATCH BASINS SHALL BE REINFORCED WITH WELDED WIRE FABRIC WHICH MEETS THE REQUIREMENTS OF ARTICLE 1006010 OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS" AS SHOWN IN THE DETAILS. THE WELDED WIRE FABRIC CUT FROM ROLLS WILL NOT BE PERMITTED.
5. COMPLY WITH IDOT HIGHWAY STANDARD 420001, HIGHWAY STANDARD BLR-14, AND HIGHWAY STANDARD BLR-10.
6. JOINTS SHALL BE SAWED TO A DEPTH OF t/4 FOR TRANSVERSE JOINTS AND LONGITUDINAL JOINTS.
7. CONSTRUCT TYPE D TRANSVERSE CONSTRUCTION JOINT WHEN CONSTRUCTION JOINT DOES NOT FALL AT AN ISOLATION OR EXPANSION JOINT.
8. JOINT SEALANT SHALL BE NP-1 OR SL-1 BY SONNEBORN COMPANY.
9. PREFORMED BITUMINOUS JOINT FILL SHALL CONFORM TO SECTION 1051 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION".

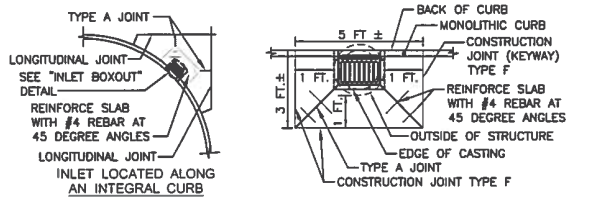
PAVEMENT JOINT TYPES
NO SCALE



NOTES:

1. PAVEMENT SLABS WITH MANHOLE CASTINGS WITHIN THE PAVEMENT LIMITS SHALL BE JOINTED AS SHOWN ON THE DETAILS.
2. DETAILS FOR STANDARD MANHOLE CASTINGS.
3. THE TRANSVERSE JOINT SPACING SHALL BE SHORTENED ON ONE OR MORE SLABS ON EITHER SIDE OF THE MANHOLE TO PERMIT A TRANSVERSE JOINT TO FALL AT THE CENTER OF THE MANHOLE.

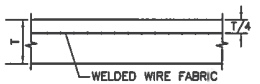
PAVEMENT JOINTS AT MANHOLES
NO SCALE



NOTES:

1. ALL INLETS SHALL BE SEPARATED FROM THE PAVEMENT AND CURB BY BOXING OUT AROUND INLET AS SHOWN ABOVE. MANHOLE CASTINGS WITHIN THE PAVEMENT LIMITS SHALL BE BOXED OUT IN A LIKE MANNER.
2. WHEN A JOINT FALLS WITHIN 5 FEET OF OR CONTACTS INLETS, MANHOLES OR OTHER STRUCTURES, SHORTEN ONE OR MORE PANELS EITHER SIDE OF THE OPENING TO PERMIT JOINT TO FALL ON ROUND STRUCTURES AND AT OR BETWEEN CORNERS OF RECTANGULAR STRUCTURES.

INLET BOXOUT
NO SCALE



WELDED WIRE FABRIC
NO SCALE

JULIE. NOTE: THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES. FOR UTILITY LOCATIONS CALL JULIE. (800) 892-0123	DESIGNED: CB/RM	REVISIONS	
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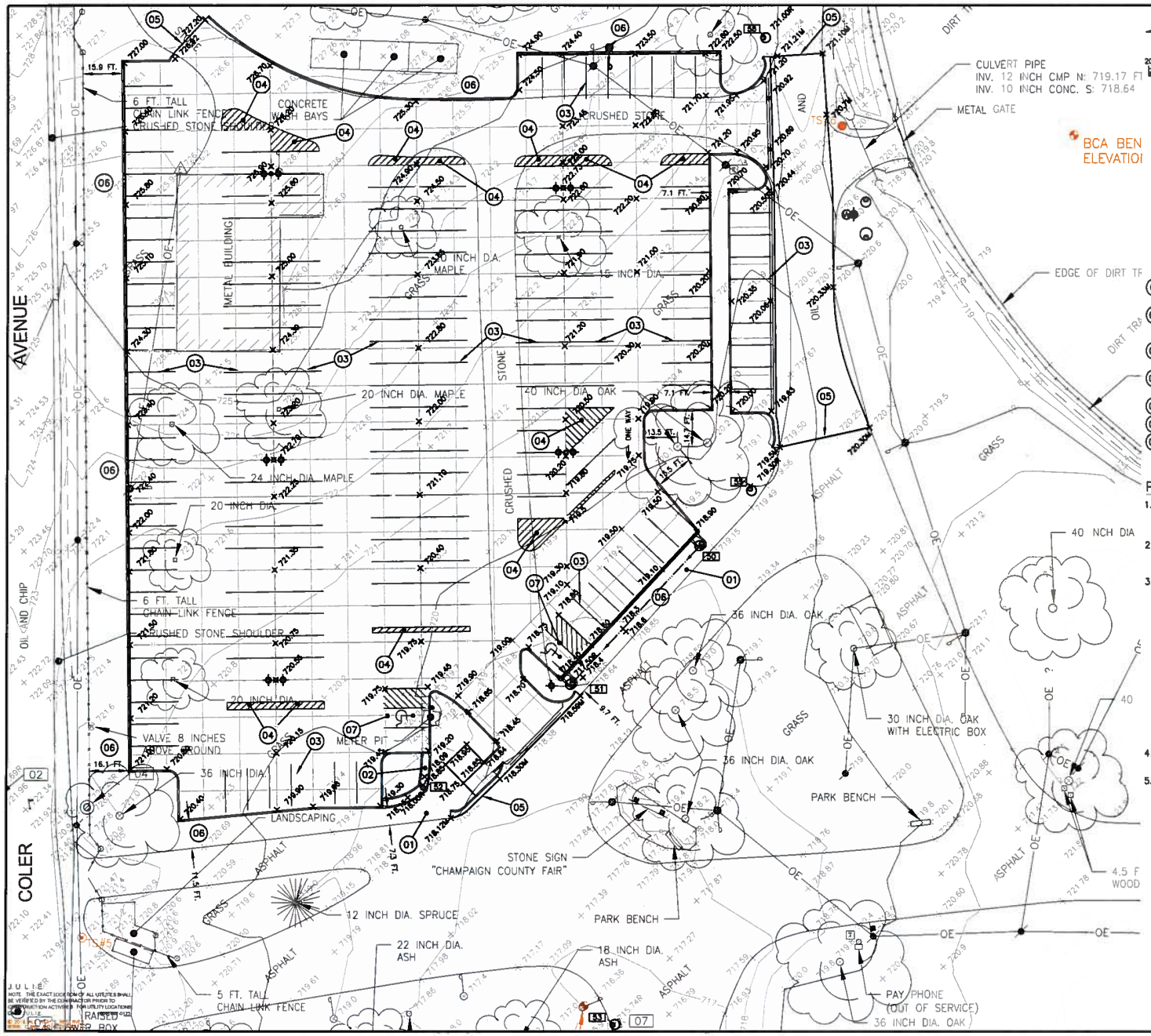
Carle

CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP,
CHAMPAIGN COUNTY, ILLINOIS

PAVEMENT JOINT DETAILS AND NOTES

DATE: 050616
SHEET: 23 OF 27
JOB: 2612-51



N O R T H

20 10 0 20 40

SCALE IN FEET

LEGEND

- PROPOSED SPOT ELEVATION
- PROPOSED PAVEMENT SPOT ELEVATION
- PROPOSED SPOT ELEVATION AT MANHOLE/INLET RIM
- PROPOSED SPOT ELEVATION TO MATCH EXISTING ELEVATION
- PROPOSED STORM MANHOLE/INLET
- PROPOSED DITCH CENTERLINE DIRECTION OF FLOW
- PROPOSED PARKING LOT LIGHT POLE
- (05) KEYED GRADING PLAN NOTE

KEYED GRADING / PAVEMENT STRIPING PLAN NOTES

(01) CONSTRUCT 4 FOOT WIDE GRASS "SHOULDER" AT 6 PERCENT CROSS SLOPE AWAY FROM PAVEMENT.

(02) CONSTRUCT STORMWATER BASIN WITH 2 PERCENT BOTTOM SLOPE TO INLET AND MAXIMUM 10 TO 1 SLOPE ALONG THE PERIMETER OF THE STORMWATER BASIN.

(03) PROPOSED 4 INCH WIDE YELLOW PARKING LOT STRIPING. SEE DETAIL THIS SHEET

(04) PROPOSED 4 INCH WIDE YELLOW "NO PARKING" STRIPING AT 3 FOOT SPACING.

(05) MATCH EXISTING ELEVATION/GRADE.

(06) REGRADE AROUND PERIMETER OF IMPROVEMENTS TO MATCH.

(07) ACCESSIBLE PARKING SPACE. PROVIDE MAXIMUM 2.0 PERCENT SLOPE IN ANY DIRECTION. PROVIDE ACCESSIBLE PARKING STRIPING AND SYMBOL. INSTALL ACCESSIBLE PARKING SIGN AND POST. SEE DETAILS SHEET 20.

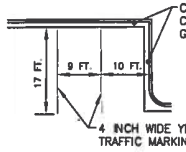
PAVEMENT STRIPING NOTES

1. STRIPING SHALL BE PERFORMED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION, EXCEPT AS OTHERWISE NOTED.
2. PARKING SPACE STRIPING FOR OFF-STREET PARKING SHALL BE YELLOW IN COLOR. ACCESSIBLE PARKING SPACE MARKINGS MAY BE SUPPLEMENTED WITH BLUE PAVEMENT MARKINGS.
3. STRIPING MATERIALS FOR PRIVATE CONSTRUCTION NEED NOT BE RETRO-REFLECTIVE AND SHALL CONSIST OF THE FOLLOWING MATERIALS:

   ASPHALT SURFACE: FAST DRYING, TYPE II LOW VOC, SOLVENT BASED CHLORINATED RUBBER TRAFFIC MARKING PAINT COMPLYING WITH FEDERAL SPECIFICATION A-A-2886B TYPE II. (DAVIS IMPERIAL COATINGS, INC.) APPLIED AT A THICKNESS OF 12 TO 15 MILS. PAVEMENT MARKING PAINT SHALL BE COLOR YELLOW.

   CONCRETE SURFACE: FAST DRYING, TYPE II LOW VOC, SOLVENT BASED CHLORINATED RUBBER TRAFFIC MARKING PAINT COMPLYING WITH FEDERAL SPECIFICATION A-A-2886B TYPE II. (DAVIS IMPERIAL COATINGS, INC.) APPLIED AT A THICKNESS OF 12 TO 15 MILS. PAVEMENT MARKING PAINT SHALL BE COLOR YELLOW.

4. SUBMIT STENCILS FOR PARKING SPACE MARKING TO THE ENGINEER OR OWNER'S REPRESENTATIVE FOR APPROVAL.
5. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR SURFACE PREPARATION, APPLICATION, HANDLING AND CURING OF STRIPING MATERIALS.



PARKING SPACE STRIPING
NO SCALE

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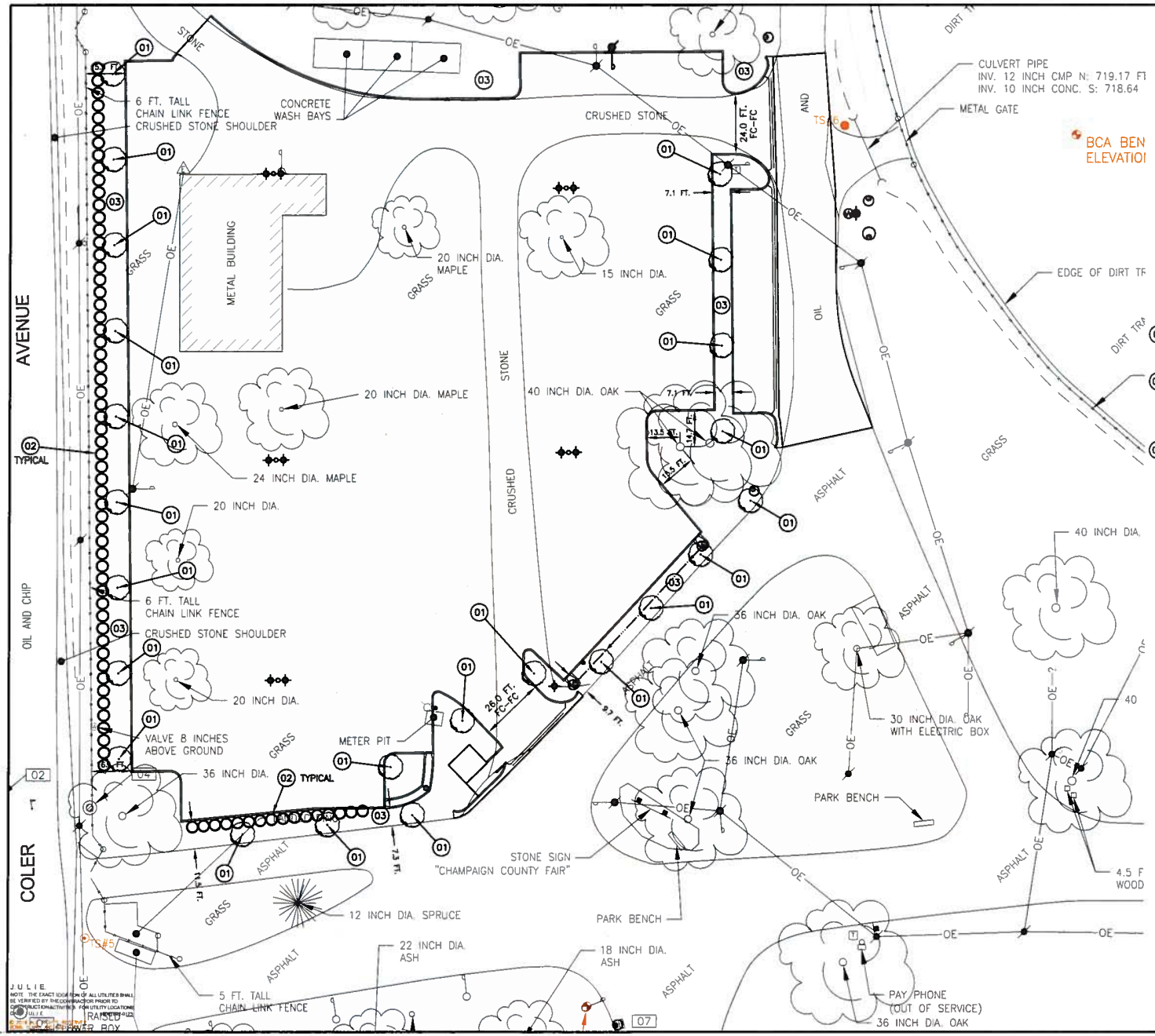
BCA

CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP,
CHAMPAIGN COUNTY, ILLINOIS

GRADING PLAN
PAVEMENT STRIPING PLAN

DATE: 050616
SHEET: 24 OF 27
JOB: 2612-51



N O R T H

20 10 0 20 40

SCALE IN FEET

LEGEND

- PROPOSED STORM MANHOLE/INLET
- PROPOSED DITCH CENTERLINE DIRECTION OF FLOW
- PROPOSED PARKING LOT LIGHT POLE
- PROPOSED SHADE TREE
- PROPOSED SCREENING VEGETATION
- (01) KEYED LANDSCAPING PLAN NOTE

KEYED LANDSCAPING PLAN NOTES

(01) PLANT SHADE TREE IN ACCORDANCE WITH TABLE VIII-5 SHADE TREE SPECIES OF THE CITY OF URBANA ORDINANCE. PROVIDE 35 FOOT MAXIMUM SPACING AND A 2-INCH MINIMUM CALIPER. CONTRACTOR SHALL SUBMIT PROPOSED TREE SPECIES FOR APPROVAL.

(02) PLANT SCREENING VEGETATION CONFORMING WITH TABLE VIII-4 SHRUB SPECIES OF THE CITY OF URBANA ZONING ORDINANCE AND A MINIMUM HEIGHT OF FOUR (4) FEET IN ACCORDANCE WITH SECTION 4.3.3.H.1.A OF THE CHAMPAIGN COUNTY ORDINANCE. CONTRACTOR SHALL SUBMIT PROPOSED SCREENING PLANT SPECIES MIX FOR APPROVAL.

(03) FINE GRADE, PREPARE SEED BED, FERTILIZE, SEED AND MULCH FOR LAWN MIXTURE ALL DISTURBED AND TRANSITION AREAS. SEE NOTES ON SHEET 18.

JULIE. NOTE: THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES. FOR UTILITY LOCATIONS CALL JULIE 1-800-892-0123

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DESIGNED:	CB/RDM		
DRAFTED:	PE		
CHECKED:	CB/ELC/TBB		
FILE:	2612-51P1.DWG		

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CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP,
CHAMPAIGN COUNTY, ILLINOIS

LANDSCAPING PLAN

DATE: 050616
SHEET: 25 OF 27
JOB: 2612-51

LIGHT FIXTURE SCHEDULE

FIXTURE NUMBER	MANUFACTURER AND CATALOG NUMBER	DESCRIPTION	LAMPS					FINISH	REMARKS
			FLUOR.	INCAND.	HID	QUANTITY	TYPE		
L1	LITHONIA KAD LED 1 63B530/50K SR5 120 SPD06 SF DDBXD	POLE MOUNT LED AREA LIGHT TYPE V DISTRIBUTION				1	109W LED 5000K	DARK BRONZE	109W LED FIXTURE, ALUMINUM CONSTRUCTION, 8450 DELIVERED LUMENS, TYPE V LIGHTING DISTRIBUTION, 120V OPERATION. FIXTURE TO BE EQUIPPED WITH FUSING. MOUNT ON 25 FT. SQUARE STEEL POLE, DARK BRONZE, VIBRATION DAMPENER. PROVIDE CONCRETE POLE BASE PER DETAIL.
L2	LITHONIA KAD LED 1 63B530/50K SR2 120 SPD06 SF DDBXD	POLE MOUNT LED AREA LIGHT TYPE II DISTRIBUTION				1	109W LED 5000K	DARK BRONZE	109W LED FIXTURE, ALUMINUM CONSTRUCTION, 8450 DELIVERED LUMENS, TYPE II LIGHTING DISTRIBUTION, 120V OPERATION. FIXTURE TO BE EQUIPPED WITH FUSING. MOUNT ON 25 FT. SQUARE STEEL POLE, DARK BRONZE, VIBRATION DAMPENER. PROVIDE CONCRETE POLE BASE PER DETAIL.

KEYED NOTES - (FOR THIS SHEET ONLY ⬡ SYMBOL)

1. REMOVE EXISTING POLE MOUNTED LIGHT AND OVERHEAD CONDUCTORS.
2. REMOVE EXISTING OVERHEAD SERVICE TO BUILDING. COORDINATE WITH UTILITY COMPANY.
3. RELOCATE EXISTING POLE AND ASSOCIATED OVERHEAD CIRCUITS.
4. PROVIDE PARKING LOT LIGHT CONTROLLER AND CONCRETE BASE. SEE DETAILS ON SHEET E2.
5. PROVIDE POLE MOUNTED LIGHT FIXTURE(S) ON CONCRETE POLE BASE. SEE LIGHT FIXTURE SCHEDULE ON THIS SHEET AND POLE BASE DETAIL ON SHEET E2.
6. PROVIDE BURIED CONDUIT AND WIRE FOR ELECTRICAL SERVICE TO CONTROLLER. TURN UP AND PROVIDE CONDUIT AND WIRE UP POLE PER UTILITY COMPANY'S REQUIREMENTS. 3 #1 IN 1 1/4" CONDUIT.
7. PROVIDE 3#10 AND #10 GROUND IN 1" BURIED CONDUIT.
8. PROVIDE 2#10 AND #10 GROUND IN 1" BURIED CONDUIT.
9. PROVIDE EMPTY 1" BURIED CONDUIT STUBBED OUT FROM POLE TO UNPAVED AREA.
10. PROVIDE 120 VOLT - 20 AMP LIGHTING CIRCUIT AND 120/240 VOLT - 20 AMP A/C CIRCUIT TO SHELTER. 2 #12, 3 #12, AND #12 GROUND IN 1" BURIED CONDUIT. COORDINATE CONNECTION AT SHELTER WITH OWNER.

SPECIFICATIONS FOR ELECTRICAL WORK

All electrical work shall be in strict accordance with 2008 National Electrical Code and all local ordinances and codes. This Contractor shall furnish and install all new UL-listed material and all labor and permits as required for completion of this project as indicated on the drawings and hereinafter specified.

Shop and Erection Drawings Schedule of Submittals:
- Parking Lot Lighting Controller and Associated Components
- Exterior Lighting Poles
- Pole Lighting Luminaries

Inspection of Bid Documents and Premises
Visit the premises, take measurements and verify all elevations shown on the drawings, inspect existing conditions and limitations, obtain first hand information necessary to submit a complete bid. Thoroughly examine the complete set of contract documents including work required by other trades. Bidders are cautioned to acquaint themselves with requirements necessitating installation work of material or equipment furnished by other contractors or the Owner.

Location of Equipment
The approximate location of all equipment is shown on the drawings. The Architect/Engineer reserves the right to change the location of all equipment 5' in any direction without these changes being made the subject of an extra charge provided such changes are made before final installation.

Conduit and Fittings
All wiring shall be installed in conduit.
All conduit above grade shall be rigid steel.
All underground conduit shall be Schedule 40 PVC electrical duct complete with couplings, connections, elbows, etc.
Provide PVC cleaner and cement to adhere and seal all joints at fittings.
Where conduits enter poured concrete bases provide rigid steel conduits and elbows.
Provide plastic bushing on open end of conduit in the pole.
Minimum conduit size shall be 1"

Cable and Wire
All wire shall have copper conductors and be listed by Underwriters Laboratories, Inc. All wire shall be type THWN 75C insulation for sizes No. 6 to 500 MCM and type THWN 75C insulation for sizes No. 12 to No. 8.

Installation of Raceways and Conduits
New raceways and conduits shall be installed as shown on the drawings.
Conduit routes shown are diagramatic. Contractor shall verify all routes of conduits and select final routes to miss existing equipment, poles, etc.
All new underground conduits shall be buried at a minimum depth of 36" below finished grade elevation.
Provide all trenching as needed for the installation of new conduits.
Backfilling shall be as follows:
1. In paved areas, sidewalks, curbs, drives, street and crushed stone shall be backfilled with compacted granular material, flowable fill or road pack and patched with material to match existing.
2. In lawn areas, compacted dirt up to rough grade ready for sod or seeding. All sod and/or seeding of lawn areas will be by others.

Contractor shall dispose of all excavated material not re-usable for backfill.
Provide polypropylene or nylon, 325 lb minimum strength, pull string in all conduits for future use.

Wiring Joints
Make all branch circuit joints for wire up to and including no. 10 AWG with expandable steel spring and polypropylene body type connectors and wire nuts manufactured by Ideal, Scotch, Buchanan or Engineer approved equal.
All joints in branch circuit conductors shall be made up in junction boxes or in the pole handholes only.
All joints shall be made with waterlight connectors.

Electrical Distribution System
Provide 120/240 volt, 1 phase, 3 wire distribution system as shown on the drawings. Furnish and install all breakers, conduit, wire and other equipment as necessary for extension of distribution. The extension of electrical distribution shall originate from new panelboard and extended to junction boxes and equipment as shown on the drawings.

Grounding
Provide complete new grounding system. All grounding shall be in strict accordance with the 2008 edition of the National Electrical Code.
Provide 5/8", 10'-0" driven copper weld grounding rod at each pole and connect to ground lug in pole handhole with 1 #10 bare copper conductor.
The complete grounding system shall be done with grounding conductors throughout the entire project installation. Separate grounding conductors for all branch circuits are not shown on the drawings, but shall be included in all raceways as if set forth on the drawings. Separate grounding conductors shall be installed in all branch circuits. Grounding conductors shall be installed in the same conduit runs as the phase and neutral conductors. The size of the grounding conductors shall be in strict accordance with Table No. 250-95 of the 2008 edition of the National Electrical Code.

Site Lighting Units
Provide site lighting fixtures where shown and as scheduled on the drawings.
Furnish each fixture as noted on the fixture schedule.
All fixtures shall be UL listed.
If the fixture for a particular location is not specifically mentioned on the drawings, figure on furnishing a fixture similar and comparable to that specified for a similar location.
Provide all light fixtures as shown on the drawings and as hereinafter specified.
Provide all exterior pole mounted fixtures with Buseman in-line water proof fuse holder, Y-type insulating boot and fuses, sized at three times normal ballast amperage. Fuse and holder to be accessible through pole base handholes.
All light fixtures shall be suitable for operation at 120 volt, 1 phase, 60 hertz unless otherwise noted on the fixture schedule.

Installation of Site Lighting Fixtures
Provide complete installation of new site lighting fixtures where shown on the drawings.
All fixtures shall be installed straight and plumb.
Provide bases as indicated on drawings.

Circuit Testing and Recordings
Provide testing of all circuits before and after extensions and record all tests for submittals.
Provide all meters and equipment to perform all tests.
All tests shall be performed with all lighting units energized.
Tests shall be as follows:
1. At panelboard
   - Voltage phase to phase on 240 volt circuits and phase to neutral on 120 volt circuits.
   - Amperes on each phase.
B. At each pole handhole.
   - Voltage.

Submit recorded test information to the engineer.

Utility Work
Coordinate the installation of the electrical service for parking lot lighting with AMEREN.
This contractor shall verify AMEREN's owner provided requirements and coordinate with AMEREN for installation of the electrical service.
All costs chargeable by the AMEREN for their work will be paid directly to utility company by the owner.
The electrical contractor shall not include any costs or his bid for the utility company charges.

Carle

J. U. L. I. E.
NOTE: THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES. FOR UTILITY LOCATIONS CALL J.U.L.I.E. (800) 892-0123

REVISIONS

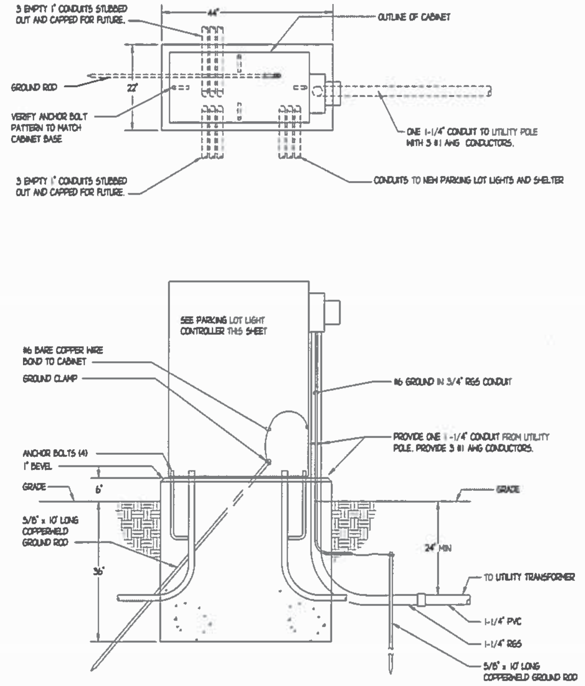
DESIGNED: BCF
DRAFTED: BCF
CHECKED: BCF
FILE: C889_E1.DWG

BERNS, CLANCY AND ASSOCIATES
ENGINEERS • SURVEYORS • PLANNERS
BCA

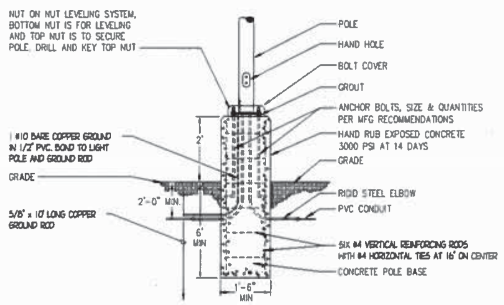
CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS
PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP,
CHAMPAIGN COUNTY, ILLINOIS

ELECTRICAL SITE PLAN

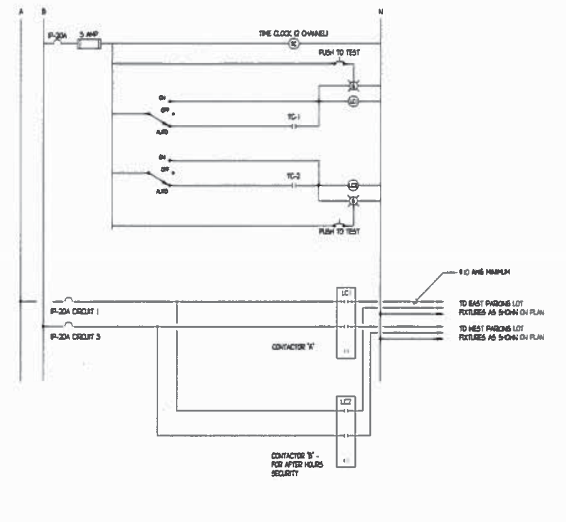
DATE: 050616
SHEET: E1 OF 27
JOB: 2612-51



2 / E2 CONCRETE BASE FOR PARKING LOT LIGHT CONTROLLER
SCALE 3/4" = 1'-0"



1 / E2 CONCRETE POLE BASE DETAIL
NO SCALE



3 / E2 PARKING LOT LIGHT CONTROL DIAGRAM
NO SCALE

PANEL SCHEDULE — **LOAD CENTER**

PANEL: LOAD CENTER
JOB NO.: 3000.000 FAIRGROUNDS PARKING LOT

SURFACE MOUNT
FLUSH MOUNT
XX MAIN BREAKER 100 AMPS
MAIN LUG ONLY ___ AMPS
DOUBLE MAIN LUGS

MAIN BUS 100 AMPS
VOLTAGE 120/240 V
PHASE 1 P
WIRE 3 W
AIC RATING 22 kA

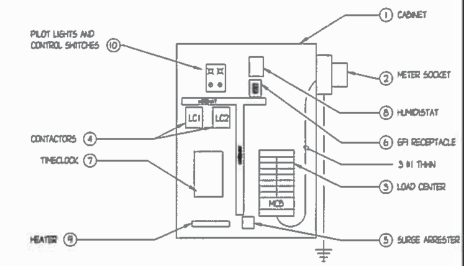
CKT. NO.	BREAKER POLE	BREAKER AMP	BREAKER CLASS	DESCRIPTION	LOAD IN KVA LTG	LOAD IN KVA REC	LOAD IN KVA EQP		CKT. NO.	BREAKER POLE	BREAKER AMP	BREAKER CLASS	DESCRIPTION	LOAD IN KVA LTG	LOAD IN KVA REC	LOAD IN KVA EQP
1	1	20		PARKING LOT LIGHTING - EAST	0.66			A	2	1	20		SHELTER LIGHTING	0.1		
3	1	20		PARKING LOT LIGHTING - WEST	0.66			B	4	2	20		SHELTER HEATER (PTAC)			1.92
5	1	20		ENCLOSURE HEATER			0.15	A	6	-	-					1.92
7	1	20		TIMECLOCK AND CONTROLS			0.40	B	8				SPACE W/BUS			
9	1	20		ENCLOSURE GFI RECEPTACLE		0.18		A	10				SPACE W BUS			
11	1	20		SPARE				B	12				SPACE W BUS			
13				SPACE W BUS				A	14				SPACE W BUS			
15				SPACE W BUS				B	16				SPACE W BUS			
17				SPACE W BUS				A	18				SPACE W BUS			

P-P VOLTS 240

	LTG	REC	EQP
CONNECTED LOAD - PHASE AB	0.76	0.18	2.07
CONNECTED LOAD - PHASE BC	0.66	0	2.4
TOTALS	1.4	0.2	4.5
TOTAL CONNECTED LOAD (KVA)		6.1	

PHASE LOADING	P A	P B
TOTAL CONNECTED LOAD (KVA)	3.0	3.1
TOTAL CONNECTED LOAD (AMPS)	25.0	25.5

NOTES:



4 / E2 PARKING LOT LIGHT CONTROLLER
SCALE 3/4" = 1'-0"

KEYED NOTES - (FOR THIS SHEET ONLY ◯ SYMBOL)

1. CABINET
50" x 36" x 17", SINGLE DOOR, NON VENTILATED, NEMA 4X ENCLOSURE. 0.125" ALUMINUM ALLOY, CONTINUOUSLY WELDED SEAMS, FULLY GASKETED DOOR WITH THREE POINT LATCHING MECHANISM WITH LOCKING PROVISIONS. 42 5/8" x 33" PANEL. FLAT BLACK POWDER COAT FINISH. APX ENCLOSURES #APX503617.
2. METER SOCKET
100AMP, 120/208 VOLT SINGLE PHASE, 3 WIRE MILBANK #U5949-RL-KK-TG
3. PANEL
100 AMP, 120/240 VOLT SINGLE PHASE, 3 WIRE. SQUARE D NQOD INTERIOR ONLY, 100A MCB. SEE SCHEDULE THIS PAGE.
4. CONTACTOR
ELECTRICALLY HELD, 3 POLE, 30AMP LIGHTING CONTACTOR, OPEN TYPE, 120 VOLT, CONTINUOUS DUTY COIL SUITABLE FOR OPERATION AT 85% OF NOMINAL COIL VOLTAGE. SQUARE D, CLASS 8903, TYPE S.
5. TRANSIENT VOLTAGE SURGE SUPPRESSOR
PANEL MOUNTED, 120/240 VAC SINGLE PHASE TVSS. SUITABLE FOR USE IN SERVICE ENTRANCE LOCATIONS. SQUARE D #SDSA3650
6. GFI RECEPTACLE
20 AMP 120 VOLT DUPLEX RECEPTACLE IN CAST BOX WITH HINGED COVER
7. TIMECLOCK
DIGITAL TWO CHANNEL, 7 DAY, WITH ASTRONOMIC AND HOLIDAY FUNCTIONS. TWO, SEPARATELY PROGRAMMED, SPDT CHANNELS. INTERNAL (FIELD REPLACEABLE) BATTERY BACK UP. 120 VOLT OPERATION, NEMA 1 ENCLOSURE. INTERMATIC #ET70215C
8. HUMIDISTAT
10% TO 60% RELATIVE HUMIDITY RANGE. 4% TO 6% DIFFERENTIAL 120V-4A RATED CONTACTS. NEMA 1 ENCLOSURE.
9. HEATER
150 WATT, 120 VOLT STRIP HEATER, WITH STEEL SHEATH, BOLT TYPE TERMINALS. MOUNT TO PANEL WITH INSULATING STAND OFFS
10. PILOT LIGHTS AND CONTROL SWITCHES
30.5 MM HEAVY DUTY, WATER-OIL-DUST TIGHT, PILOT LIGHTS WITH GREEN LENS AND PUSH-TO-TEST. 30.5 MM HEAVY DUTY, WATER-OIL-DUTY TIGHT, SELECTOR SWITCHES, THREE POSITION WITH "ON-OFF-REMOTE" LEGEND PLATE. SQUARE D TYPE K CLASS 9001

J.U.L.I.E.
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FILE: C889_E2.DWG

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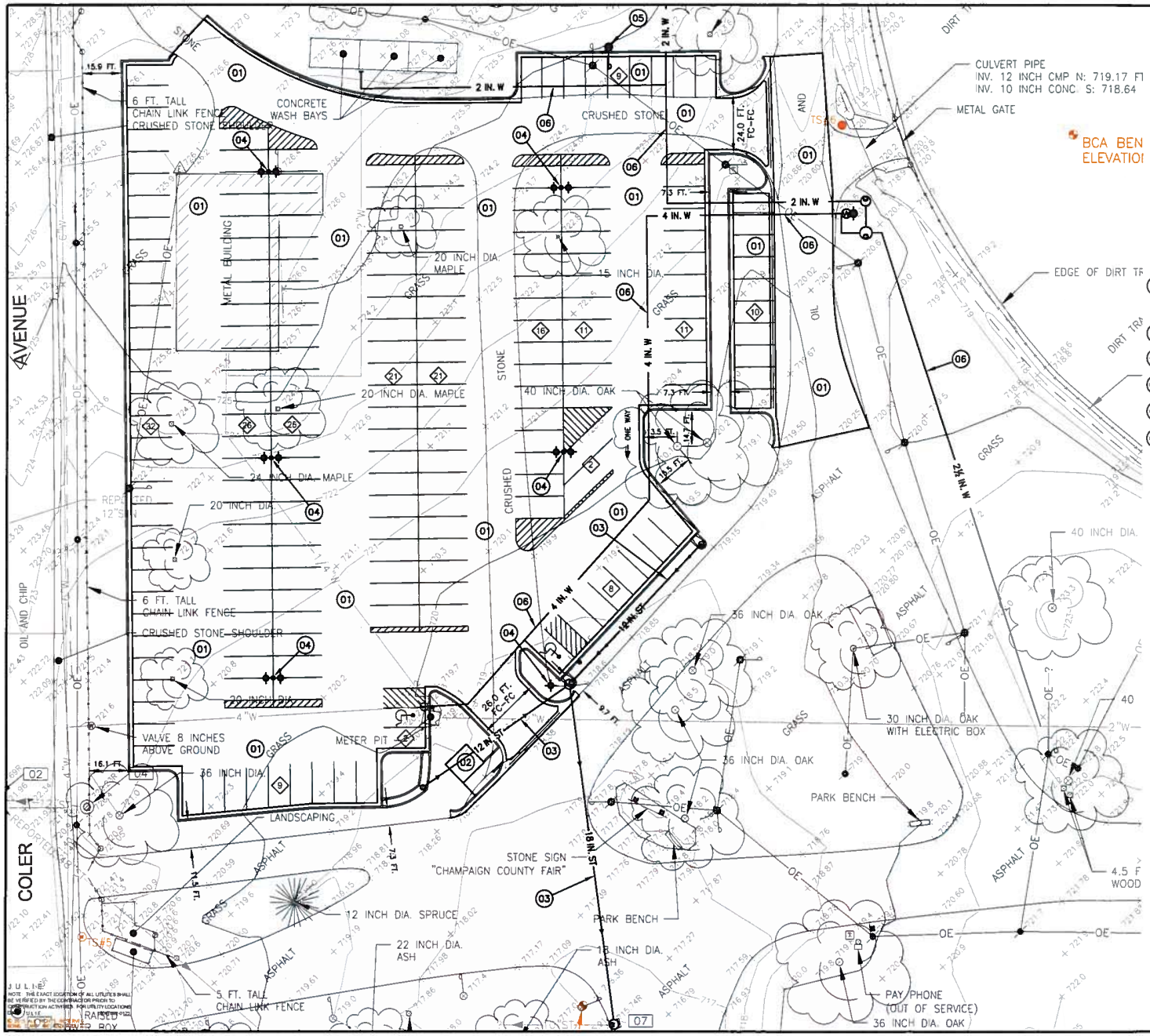
CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP, CHAMPAIGN COUNTY, ILLINOIS

ELECTRICAL DETAILS

DATE: 050616
SHEET: E2 OF 27
JOB: 2612-51



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BCA

CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP
CHAMPAIGN COUNTY, ILLINOIS

SITE PLAN

DESIGNED:	CB/RDW
DRAFTED:	PE
CHECKED:	CB/ELC/TBB
FILE:	2612-51P1.DWG

REVISIONS

DATE: 032415
SHEET: 5 OF 24
JOB: 2612-51

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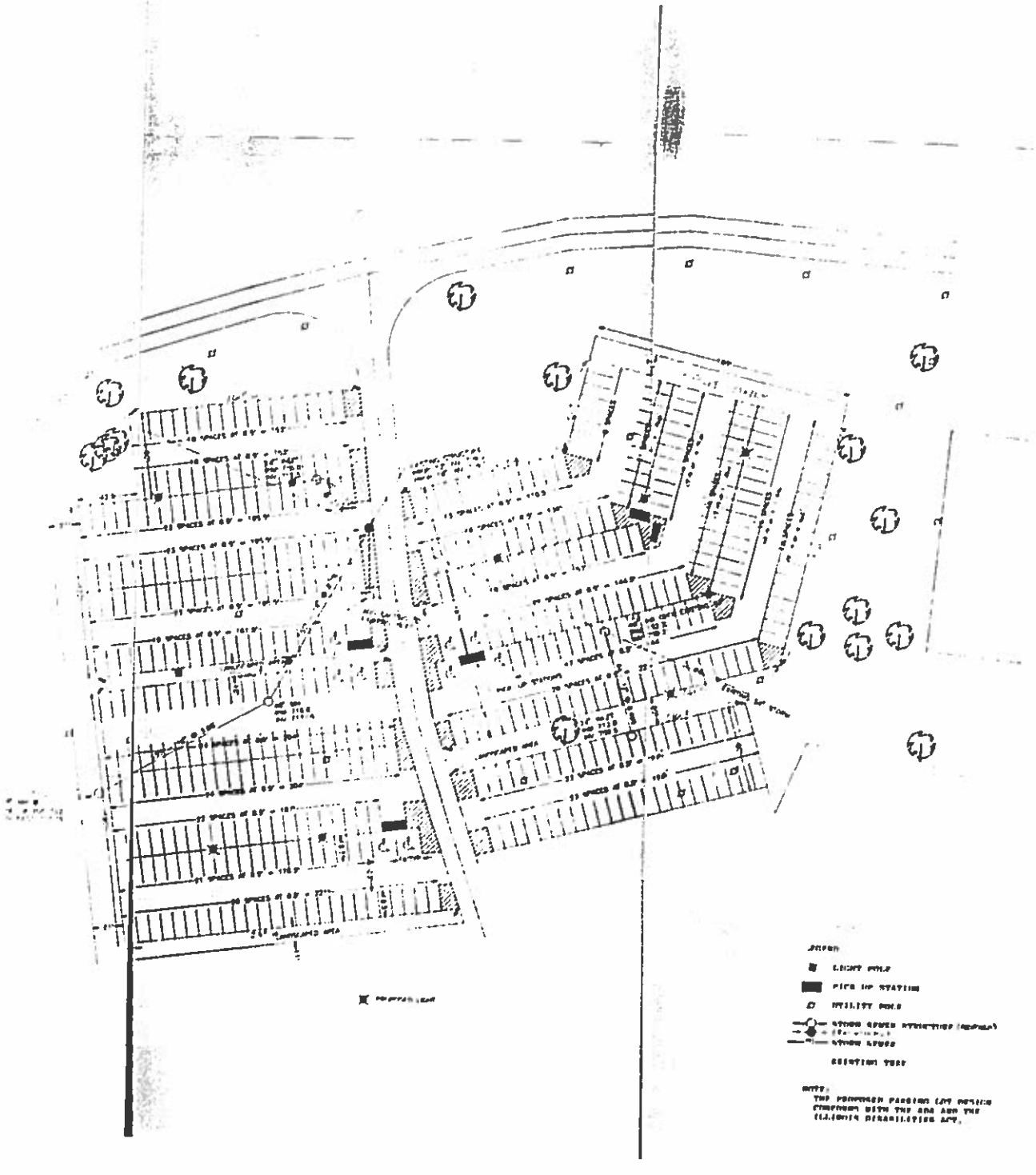


N

0 20 40
SCALE: 1"=40'

1994
CSPlan 3/2/95

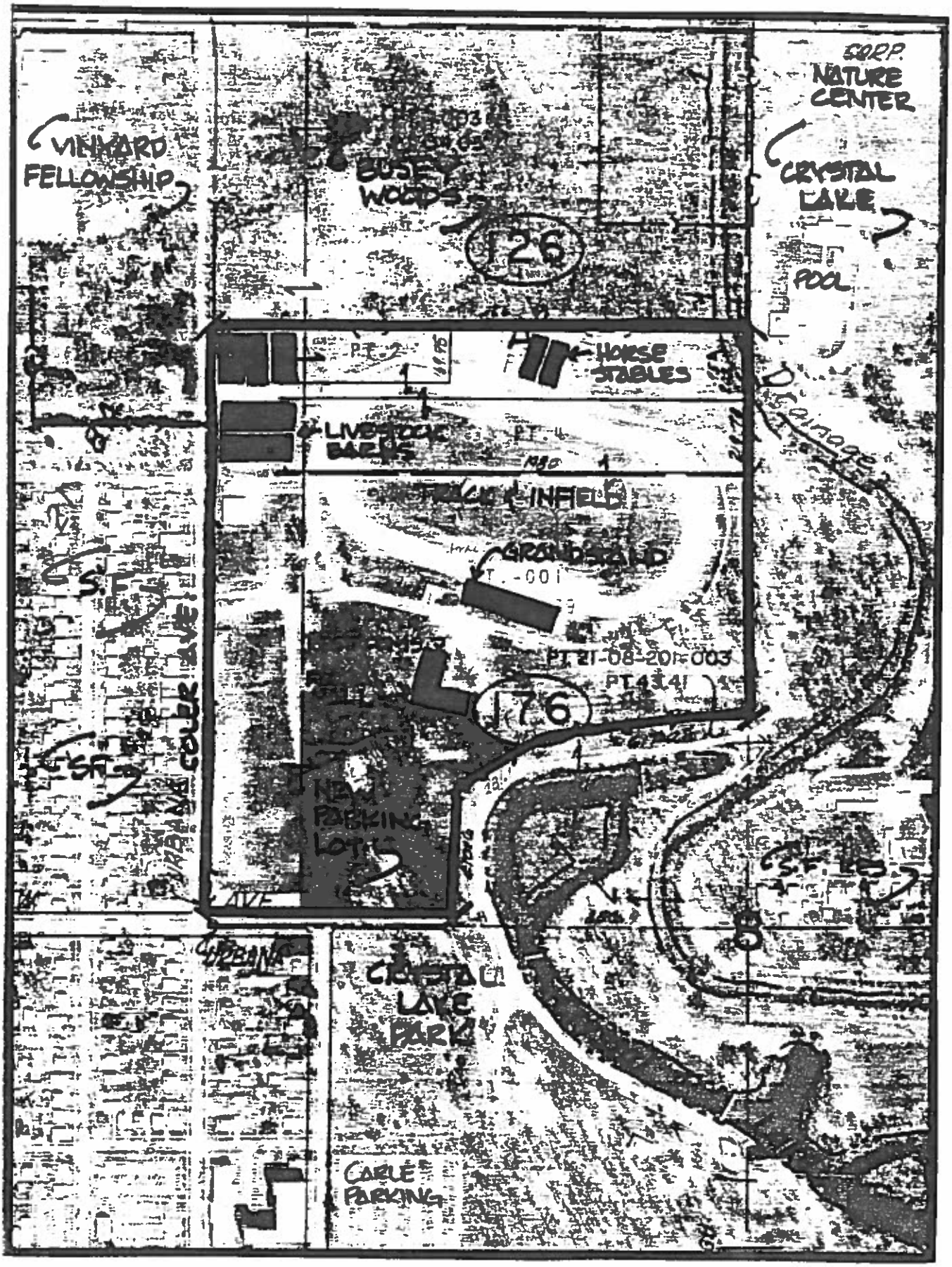
DAVID E. ARENDT
87757
REGISTERED
PROFESSIONAL
ENGINEER
OF
ILLINOIS

#1

HDC

PROPOSED PARKING PLAN PHASE 3
CHAMPAIGN COUNTY FAIR GROUNDS

SITE PLAN*



* aerial photo submitted by petitioner notes by staff 2-23-95

962-S-95

FINDING OF FACT
AND FINAL DETERMINATION
of
Champaign County Zoning Board of Appeals

Final Determination:	Granted
Date:	March 2, 1995
Petitioner:	Champaign County Fair Association c/o Keith Kesler
Request:	For a Special Use Permit to allow continued use and expansion of a non-conforming public fairgrounds in the CR, Conservation-Recreation zoning District.

Finding of Fact

From the documents of record and the testimony and exhibits received at the public hearing conducted on March 2, 1995 the Zoning Board of Appeals of Champaign County finds that:

1. The Champaign County Fair Association is the owner of the subject property.

2. The subject property encompasses approximately 53.79 acres of land located in Urbana Township, Section 8, commonly known as the Champaign County Fairgrounds, north side of Fairview Avenue, east side of Coler Avenue, Urbana.

3. The subject property is zoned CR, Conservation-Recreation.

4. The land surrounding the subject property is zoned by the City of Urbana to the north, south, east, and west: CRE, Conservation-Recreation-Education to the north, south and east; R-2, Single Family to the west.

5. The site is bordered by Busey Woods to the north; Crystal Lake Park and Single Family Residences to the south; Crystal Lake Park pool and Nature Center to the east; and Single Family Residences to the west.

6. The subject property is located within the One and One-Half Mile Extraterritorial Jurisdiction of the City of Urbana.

7. The Comprehensive Plan for the City of Urbana has designated the subject property as Public/Private Recreation.

8. The subject property is partially located within a Special Flood Hazard Area, however, no proposed construction appears to be located within the regulatory floodplain.

9. The Champaign County Soil and Water Conservation District declined the request for a Natural Resource Report for this case.

10. A Traffic Impact Analysis was not prepared for this case

11. The Fairgrounds have been in operation at the subject site since prior to the adoption of County Zoning in 1973, and therefore have retained non-conforming rights.

12. This Special Use Permit case is the result of the petitioner's desire to construct a new 2,052 square foot restroom facility. Any further expansions deemed significant expansions of a previously issued Special Use Permit will require additional Special Use Permits.

13. Zoning Case 954-AT-95 adopted January 17, 1995 allowed for public fairgrounds to be permitted by Special Use Permit in the CR Zoning District. No standard conditions affecting Section 6 of the Zoning Ordinance were adopted in conjunction with that case.

14. The fairgrounds have been allowed a limited number of Zoning Use Permits without being required to file a Special Use Permit. These previously approved construction activities were not deemed significant expansions or improvements contributing to the longevity of a non-conforming use.

Documents of Record

1. Preliminary Memorandum, with attachments, dated February 22, 1995
2. Petition filed by applicant dated January 27, 1994
3. Site Plan submitted by petitioner with application
4. Correspondence dated February 23, 1995 from Robin Hall, Director of Parks and Recreation, Urbana Park District, 303 West University Avenue, Urbana Il, 61801
5. Correspondence dated February 27, 1995 from John M. Snyder, Vice President of Support Services, Carle Foundation Hospital, 611 West Park Street, Urbana, Il 61801

Determination

Pursuant to the authority granted by Section 9.2 of the Champaign County Zoning Ordinance, the Zoning Board of Appeals of Champaign County determines that:

> The Special Use requested in Case 962-S-94 is hereby granted to the petitioners, the Champaign County Fair Association c/o Keith Kesler, to allow continued operation and expansion of a non-conforming public fairgrounds in the CR, Conservation-Recreation Zoning District, on the following property described to wit: a tract of land in the Southeast Quarter and parts of the Southwest Quarter and the Northeast Quarter of Section 8, Township 19 North, Range 9 East of the Third Principal Meridian, Urbana Township, Champaign County, Illinois.

The foregoing is an accurate and complete record of the Findings and Determination of the Zoning Board of Appeals of Champaign County.

SIGNED:

Jonathan Schroeder, Chairman
Champaign County Zoning Board of Appeals

ATTEST:

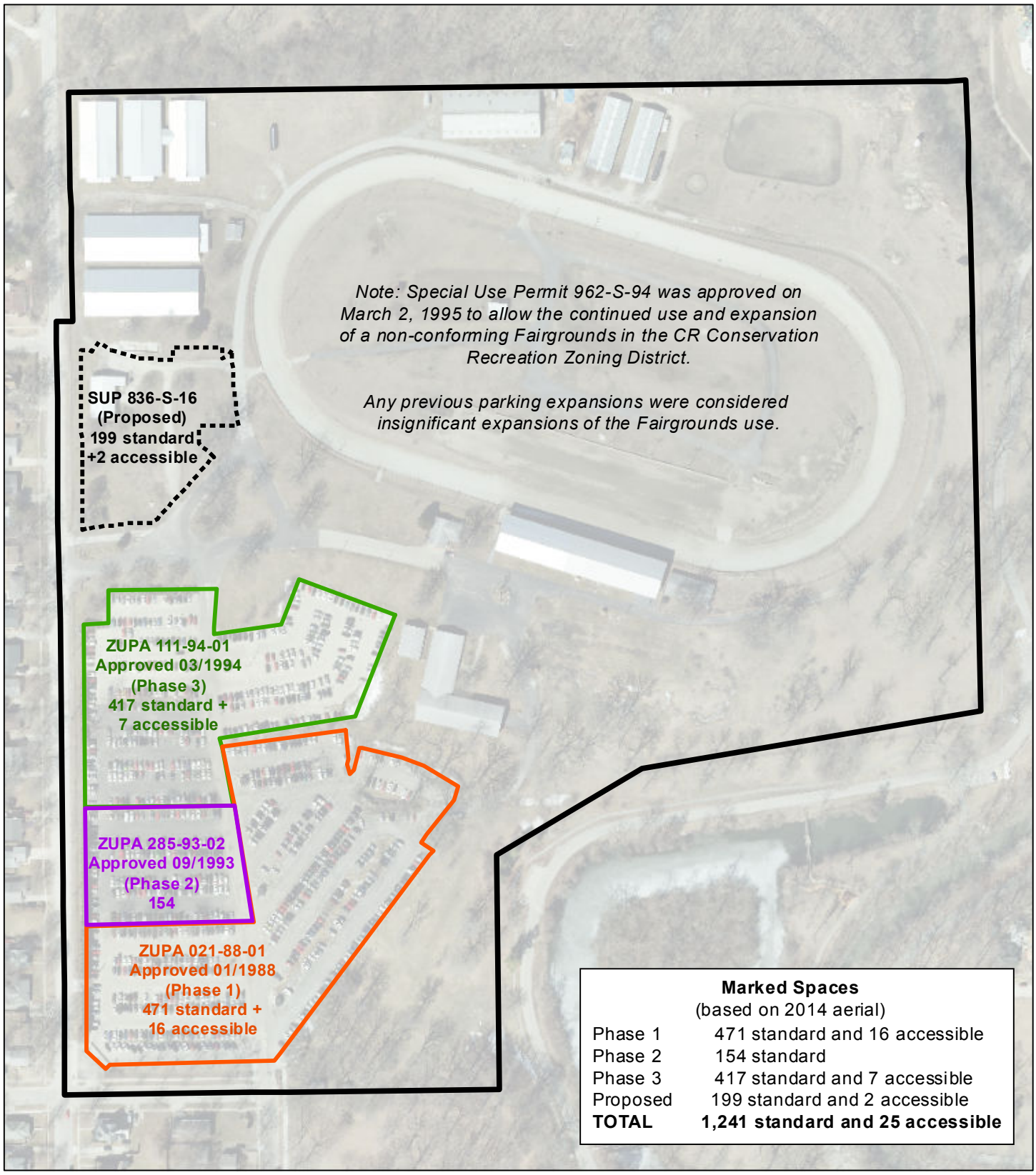
Secretary to the Zoning Board of Appeals

March 16, 1995
Date

zba\findfact\962-s-94.fof

Parking Expansions

Case 836-S-16
June 30, 2016



ORDINANCE NO. 977

ORDINANCE AMENDING THE CHAMPAIGN COUNTY ZONING ORDINANCE

ZONING CASE 819-AT-15

WHEREAS, the Champaign County Zoning Board of Appeals held a public hearing, made a formal recommendation for approval, and forwarded to this Board Case Number 819-AT-15:

WHEREAS, the Champaign County Board believes it is for the best interests of the County and for the public good and welfare to amend the Champaign County Zoning Ordinance in a manner hereinafter provided;

NOW, THEREFORE BE IT ORDAINED, by the Champaign County Board, Champaign County, Illinois, that Resolution No. 971, *The Zoning Ordinance of the County of Champaign, Illinois* be amended in the manner attached hereto.

PRESENTED, PASSED, APPROVED, AND RECORDED this 17th day of March, A.D. 2016.

SIGNED:

Pattsi Petrie, Chair
Champaign County Board
Champaign, Illinois

ATTEST:

Gordy Hulten, County Clerk and *Ex Officio*
Clerk of the Champaign County Board

PART A

1. Revise Section 6.1.3 by adding the following special provision (standard condition) for "Fairground" to read as follows:

SECTION 6.1.3 SCHEDULE OF STANDARD CONDITIONS FOR SPECIFIC TYPES OF SPECIAL USES

SPECIAL USES or USE Categories	Minimum Fencing Required[6]	Minimum LOT Size		Maximum HEIGHT		Required YARDS (feet) Front Setback from STREET Centerline[2] STREET Classification			SIDE	REAR	Explanatory or Special Provisions
		AREA (Acres)	Width (Feet)	Feet	Stories	MAJOR	COLLECTOR	MINOR			
Fairground	6' wire mesh	20	(1)	(1)	(1)	100	100	100	50	50	*See below
	Site design, land management, and storm water management designs and practices shall provide effective site drainage; shall meet or exceed state and federal water quality standards; shall protect downstream drainage patterns; shall provide for stream flows that support healthy aquatic ecosystems; shall minimize impacts on adjacent properties and cause no more than minimal disturbance to the stream corridor environment; and, shall wherever possible, preserve existing habitat, enhance degraded habitat, and restore habitat .										

PART B

1. Add new subparagraph 4.2.1 C.4. to read as follows:

4. PARKING LOT and related passenger waiting buildings may be authorized in the CR District only as an additional principal USE or additional principal STRUCTURE on Public Fairgrounds by SPECIAL USE Permit subject to Section 5.2.

2. Revise Section 5.2 by revising "PARKING GARAGE or LOT" and adding a new footnote to read as follows:

Principal USES	Zoning DISTRICTS														
	CR	AG-1	AG-2	R-1	R-2	R-3	R-4	R-5	B-1	B-2	B-3	B-4	B-5	I-1	I-2
Public and Quasi-Public Facilities															
PARKING GARAGE or															
PARKING LOT	S[22]														

Footnotes

22. PARKING LOT and related passenger waiting buildings may be authorized in the CR District only as an additional principal USE or additional principal STRUCTURE on Public Fairgrounds by SPECIAL USE Permit subject to the standard conditions in Section 6.1.3. provided that the Public Fairgrounds were an established use at the subject location on October 10, 1973, and provided that a Public Fair must continue to be held at the Public Fairgrounds or the Special Use Permit shall become void and subject to the standard conditions in Section 6.1.3.

3. Revise Section 6.1.3 by adding a new special use "PARKING LOT and related passenger waiting buildings as an additional principal USE or additional principal STRUCTURE on a Public Fairgrounds in the CR District" with special provisions (standard conditions) to read as follows:

SECTION 6.1.3 SCHEDULE OF STANDARD CONDITIONS FOR SPECIFIC TYPES OF SPECIAL USES

SPECIAL USES or USE Categories	Minimum Fencing Required[6]	Minimum LOT Size		Maximum HEIGHT		Required YARDS (feet) Front Setback from STREET Centerline[2] STREET Classification					Explanatory or Special Provisions
		AREA (Acres)	Width (Feet)	Feet	Stories	MAJOR	COLLECTOR	MINOR	SIDE	REAR	
PARKING LOT and related passenger waiting buildings as an additional principal USE or additional principal STRUCTURE on a Public Fairgrounds in the CR District	NR	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	*See below
	At a Public Fairgrounds that was an established USE at the subject location on October 10, 1973, all or part of the parking area(s) may be used for parking not otherwise related to the Fairground and the non-Fairground parking may be limited to parking for a single other non-Fairground USE or to multiple other non-Fairground USES and may include the construction and use of related passenger waiting buildings, so long as authorized as part of the Special Use Permit and subject to the following: a. Traffic impacts shall be considered. b. A Public Fair must continue to be held at the Public Fairgrounds or the Special Use Permit shall become void.										

BERNS, CLANCY AND ASSOCIATES
PROFESSIONAL CORPORATION

ENGINEERS • SURVEYORS • PLANNERS

THOMAS BERNS
EDWARD CLANCY
CHRISTOPHER BILLING
DONALD WAUTHIER
GREGORY GUSTAFSON

ROGER MEYER
JUSTIN HOUSTON
DAN ROTHERMEL
ZACHARY SCHMIDT

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OF COUNSEL

May 25, 2016

STORMWATER MANAGEMENT PLAN
CARLE FOUNDATION HOSPITAL
PARKING LOT IMPROVEMENTS
CHAMPAIGN COUNTY FAIRGROUNDS
PART OF THE NORTHWEST QUARTER OF SECTION 8, TOWNSHIP 19 NORTH, RANGE 9 OF THE THIRD PRINCIPAL MERIDIAN, URBANA TOWNSHIP, CHAMPAIGN COUNTY, ILLINOIS

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STORM WATER MANAGEMENT PLAN PREPARED BY
SITE / CIVIL ENGINEER:
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2612-51

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CARLE FOUNDATION HOSPITAL
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Carle Foundation Hospital proposes to construct a new 1.72 acre Portland Cement Concrete parking lot on the western side of the Champaign County Fairgrounds property northerly of the western Fairground Entrance along Coler Avenue and southerly of the existing Livestock Pavilions. An existing storage building on subject site will be demolished in conjunction with parking lot construction.

We utilized the rational method to calculate rainfall runoff and stormwater detention volume for this Stormwater Management Plan (see Summary of Formulas, Page 1.02).

EXISTING CONDITIONS

A small existing concrete wash area for livestock is located northerly of the proposed parking lot within the "foot print" of the proposed parking lot drainage area watershed. An outlet from the concrete wash area appears to drain southeasterly. We anticipate that this concrete wash area is served by an on-site private sewage disposal system or sanitary sewer that also serves a restroom in the storage building to be demolished. Therefore, we excluded this small concrete wash area from the stormwater drainage area and stormwater management calculations for the new parking lot even though it is within the watershed boundary.

The proposed parking lot encompasses 1.5 acres of the overall 2.42 acre watershed designated as Drainage Area "B" and depicted on the accompanying aerial photo map exhibit. Drainage Area "B" includes all proposed site improvements and all areas draining to and through the proposed site improvements for stormwater management consideration. Stormwater runoff from Drainage Area "B" currently flows on the surface generally southeasterly towards the fairgrounds west entrance driveway pavement. This surface runoff crosses the driveway pavement approximately 200 feet easterly of the Western Fairground Entrance Gate and thence flows southerly across the fairgrounds entrance driveway pavement towards Project Inlet 07. Project Inlet 07 is located in the southwestern quadrant of the intersection of existing Fairground entrance driveway pavements. A 10 inch diameter storm sewer drains Project Inlet 07 westerly, presumably to a blind connection to an existing 24 inch diameter City of Urbana storm sewer which drains southeasterly and connects to a City of Urbana 54 inch diameter storm sewer at Project Inlet 08.

Rainfall runoff in excess of the capacity of Project Inlet 07 currently flows southerly over the surface of the existing parking lot and fairgrounds driveway towards Project Inlet 08. Project Inlet 08 is located approximately 130 feet southerly of Project Inlet 07. A 54 inch diameter storm sewer extends southeasterly from Project Inlet 08 to Project Inlet 12 which is located 50 feet easterly of the southeastern northeast corner of an existing parking lot. This 54 inch diameter storm sewer then continues southeasterly and thence easterly through Crystal Lake Park. The 54 inch diameter storm sewer then discharges into the Crystal Lake Sediment Basin located at the northeasterly end of Crystal Lake.

Rainfall runoff in excess of the capacity of Project Inlet 08 flows southeasterly over the surface of the existing fairgrounds parking lot towards Project Inlet 12 and Project Inlet 13. Rainfall runoff in excess of the capacity of those two (2) inlets continues flowing over land southeasterly towards Crystal Lake. A small berm has been constructed within the fairgrounds property immediately adjacent to the fairgrounds title line in order to create an informal stormwater management basin. This informal stormwater management basin outlets through Project Inlet 11 into a 15 inch diameter storm sewer. The 15 inch diameter storm sewer flows easterly and outlets directly into Crystal Lake. Once the informal stormwater management basin is "full" the berm is over topped and rainfall runoff flows over land towards Crystal Lake.

STORMWATER DETENTION REQUIREMENTS

Champaign County regulations require that storage be provided for excess stormwater runoff created by the construction of the 1.5 acre parking lot. Local topography and the need to maximize space utilization at the proposed parking lot site would require construction of underground "on-site" storm water detention facilities for the proposed new parking lot. Our calculations indicate a theoretical underground detention facility with an area of approximately 5,200 square feet and a depth of 4 feet would meet or exceed the stormwater detention requirements of the Champaign County regulations (see Summary on Page 5.07).

Construction of underground stormwater detention systems is generally more costly than construction of surface stormwater detention facilities. As an alternative to construction of "on-site" underground stormwater detention, we identified a nearby "off-site" location within Drainage Area "E" where our calculations indicate surface stormwater detention facilities can be provided. We propose to construct stormwater detention facilities at the "off-site" location in lieu of construction of the underground stormwater detention basin within Drainage Area "B". The proposed stormwater detention basin within Drainage Area "E" is proposed to equal or exceed the requirements for construction of a stormwater detention basin within Drainage Area "B".

ALTERNATIVE STORMWATER DETENTION

Drainage Area "E" encompassing 4.3 acres of primarily grass surface is located between the southernmost parking area to the west and Crystal Lake to the east. Drainage Area "E" is a large open area with trees on the higher ground and two (2) large ash trees in the low ground. The presence of the emerald ash borer in Champaign County will likely result in the loss of these two (2) ash trees within a few years. Removal of these ash trees would allow excavation for additional stormwater detention volume in this low area within Drainage Area "E".

Drainage Area "D" encompasses the southern 2.4 acres of the existing fairgrounds parking lot and is located westerly of Drainage Area "E". Drainage Area "D" currently drains to the City of Urbana 54 inch diameter storm sewer system and then to the existing Crystal Lake Sediment Forebay without benefit of any potential water quality improvement or significant stormwater detention. Redirection of runoff from Drainage Area "D" to a proposed "off-site" detention basin within Drainage Area "E" will allow grass to filter the initial flow and improve water quality. This proposed stormwater detention basin location will also serve as an initial sediment basin during larger rainfall events. Diversion of stormwater runoff from the Drainage Area "D" to the proposed "off-site" stormwater detention basin within Drainage Area "E" is anticipated to improve the overall water quality of stormwater draining into Crystal Lake to a noticeable degree.

As a part of previous parking lot improvements for Carle Hospital at the Fairgrounds site, curbing was installed along the southeastern side of the existing parking lot within Drainage Area "D" to direct parking lot stormwater runoff into existing Project Inlet 10 and an existing 18 inch diameter storm sewer draining to the 54 inch diameter storm sewer at Project Inlet 12. See the accompanying exhibit for further information.

Project Inlet 10 was constructed in a manner which allows excess stormwater runoff to overflow Project Inlet 10 and to flow into a low area to the east and south. In the past, a berm was constructed in this low area along the eastern boundary line of the Fairground property / western boundary of Urbana Park District's Crystal Lake Park. Project Inlet 11 was installed in a low area westerly of said berm. Project Inlet 11 is connected to a 15 inch diameter storm drain and drains directly to Crystal Lake. Project Inlet 12 and 13 located northeasterly of Project Inlet 10 are also located in this low area and they also drain to the City of Urbana 54 inch diameter storm sewer.

The above improvements appear to be designed primarily to protect Crystal Lake Park from erosion due to increased flow of stormwater surface runoff from previous parking lot expansions within the fairgrounds site. The above described berm and outlet improvements also provide a limited amount of stormwater detention during large stormwater events. However, Crystal Lake itself currently serves as a detention basin not only for the Fairgrounds site, but for a much larger 100 acre upstream area of Urbana served by the existing 54 inch diameter storm sewer system. All these features are depicted on the accompanying aerial photo exhibit.

We propose to construct a new stormwater detention basin at the northerly end of Drainage Area "E" that will capture excess stormwater runoff from Drainage Area "D" and Drainage Area "E".

We propose to construct a berm southwesterly of Project Inlet 10 and extending southeasterly to the existing berm. We propose berm improvements to provide a minimum top of berm elevation of 708.0 feet and a new elevated rim elevation of 707.5 feet at Project Inlet 11 which will allow Project Inlet 11 to serve as the emergency overflow for the new basin. We propose to construct a new Project Inlet 20 as the primary outlet for the new stormwater detention basin. Project Inlet 20 would discharge into Project Inlet 12 and the existing 54 inch diameter City of Urbana storm sewer via a new 15 inch diameter storm sewer. We propose to modify the existing curbs within the Drainage Area "D" parking lot so that stormwater runoff from Drainage Area "D" is directed into the new stormwater detention basin before it enters Project Inlet 10.

We note the proposed stormwater detention basin will back up into the existing parking lot at an elevation of 707.65 feet and then flow along the existing curb northeasterly to Project Inlet 10 and the grass area easterly of Project Inlet 10 and thence to the existing 54 inch diameter storm sewer at Project Inlet 12. Excess rainfall runoff that cannot be accommodated by the existing inlets and storm sewers will continue to flow over land towards Crystal Lake.

One of the key elements in determining whether or not the proposed stormwater detention basin is adequate is to determine the characteristics of a stormwater basin constructed to serve Drainage Area "B". We outline our review of the performance of such a "theoretical" basin below.

DOWNSTREAM OUTLET STORM SEWER CAPACITY

The proposed parking lot development on the 2.42 acre site (Drainage Area "B") would result in approximately 71% impervious surfaces (pavements and buildings) and approximately 29% pervious surfaces (grass) (see Page 2.02). We calculate a post development time of concentration of 22 minutes and a post development stormwater peak runoff rate of 11.9 cfs for a 50 year return period rainfall event and a peak rate of runoff of 6.2 cfs for a 5 year return period rainfall event from Drainage Area "B". If on-site stormwater detention is not constructed for the new parking lot (Drainage Area "B") but is instead constructed to detain stormwater runoff from Drainage Area "D" and Drainage Area "E", the ability of the immediate downstream storm drains to accommodate the additional flow of stormwater runoff from Drainage Area "B" must considered. According to the regulations the storm sewer system for the improved Drainage Area "B" must be capable of handling the 5 year return period peak flow rate of 6.2 cfs.

The existing 48 inch diameter City of Urbana storm sewer upstream of Project Inlet 08 has a calculated capacity of 163 cfs. The existing 54 inch diameter City of Urbana storm sewer downstream of Project Inlet 08 has a calculated capacity of 203 cfs. We calculate approximately 4.7 acres of Drainage Area "C" drains to Project Inlet 08 with a peak stormwater runoff rate of approximately 14.6 cfs during a 5 year return period rainfall event.

An existing 24 inch diameter storm sewer flows into Project Inlet 08 from the north. City of Urbana investigation of this existing 24 inch diameter storm sewer indicates the storm sewer is abandoned upstream of Project Inlet 07. We calculate that post development Drainage Area "B" has a peak rate of stormwater runoff of 6.2 cfs during a 5 year return period rainfall event. The post development maximum flow rate downstream of Project Inlet 08 is therefore 184 cfs (163-upstream + 6.2-Drainage Area "B" + 14.6-Drainage Area "C"). Therefore, the existing 54 inch diameter City of Urbana storm sewer appears to have sufficient capacity to accept stormwater runoff from our proposed parking lot site for a 5 year return period rainfall event without benefit of stormwater detention.

STORMWATER DETENTION VOLUME

The proposed 2.42 acre parking lot site (Drainage Area "B") is currently approximately 11% impervious surfaces (pavements and buildings) and approximately 89% pervious surfaces (grass and crushed stone). We calculate a current conditions time of stormwater concentration of 22 minutes and a current conditions stormwater peak runoff rate of 2.7 cfs for a 5 year storm event (see Page 2.01). This would be the maximum allowable release rate for a stormwater detention basin serving the improved Drainage Area "B".

In an effort to determine the volume of stormwater runoff that would need to be stored by a theoretical stormwater detention basin serving the proposed parking lot within Drainage Area "B", we performed a design analysis for the construction of a theoretical underground stormwater detention basin for the improved Drainage Area "B". We calculated a time of concentration of 22 minutes for Drainage Area "B" under existing conditions, with a peak rate of runoff of 2.7 cfs during a 5 year return period storm event. This was utilized as the maximum allowable release rate for the theoretical underground stormwater detention basin.

Our theoretical stormwater detention volume calculations indicates approximately 0.4 acre feet of stormwater detention volume is required if underground stormwater detention is provided within or immediately adjacent to the proposed parking lot site (see Page 5.05). We utilized the modified Rational Method to determine storage volume requirements.

The proposed "off-site" stormwater detention basin within Drainage Area "E" will provide stormwater management for 2.76 acres of impervious parking lot area, 0.3 acres of detention basin area, and 3.55 acres of grass and trees (see Page 2.06). Thus, this approach provides stormwater management for an area well in excess of just the proposed 2.42 acre parking lot site (see Page 2.01 and Page 2.02).

Drainage Area "D" and Drainage Area "E" will drain into the proposed "off-site" stormwater detention basin. The total watershed area draining towards the proposed "off-site" stormwater detention basin contains 35% more impervious surface area than Drainage Area "B", 80% more pervious area than Drainage Area "B", and 65% more total area than Drainage Area "B". In addition, Drainage Area "D" and Drainage Area "E" are significantly steeper in surface gradient than Drainage Area "B". Thus, surface runoff occurs more quickly and is more intense for any individual rainstorm within Drainage Area "D" and Drainage Area "E" as compared to Drainage Area "B".

Our stormwater routing calculations in Section 6 of our Detention Basin Calculations for the proposed "off-site" detention basin indicate a peak water surface elevation of 705.9 feet with a peak primary outflow rate of 4.7 cfs, and an average primary outlet flow of 3.9 cfs for a 5 year return period storm event (see Page 6.02). Our calculations estimate a peak water surface elevation of 707.2 feet, a peak primary outflow rate of 5.7 cfs, and an average primary outlet flow of 4.4 cfs for a 50 year return period storm event (see Page 6.05). We also estimate a peak water surface elevation of 707.6 feet, a peak primary outflow rate of 6.8 cfs, and an average primary outlet flow of 4.9 cfs for a 100 year return period storm event (see Page 6.06). Project Inlet 11 will serve as an emergency overflow at a proposed rim elevation of 707.5 feet approximately ¼ foot above the peak water surface elevation for a 50 year event and approximately 1-½ inch below the theoretical peak water surface elevation for a 100 year event.

Our Stormwater Detention Basin Calculations in Section 6 assume a "best case" open outfall for the proposed 15 inch diameter storm sewer into the existing 54 inch diameter storm sewer at Project Inlet 12. The FEMA Flood Insurance Study for Champaign County, dated October 2, 2013 indicates flood elevations along the Saline Branch Creek may reduce the capacity of the proposed 15 inch diameter outfall storm sewer during larger rainfall events (see attached FIRM). Therefore, we also evaluated the "worst case" flow capacity of the proposed 15 inch diameter storm sewer to determine the maximum outflow rate from the proposed stormwater detention basin during flooding conditions along the Saline Branch Creek at the outfall of the 15 inch diameter storm sewer. We then calculated the peak stormwater detention basin storage volume and water surface elevation based upon the restricted outflow rate caused by Saline Branch Creek flooding.

The FEMA Flood Study indicates an approximate 0.05% water surface slope along the Saline Branch Drainage Ditch easterly of Crystal Lake and northwesterly of Broadway Avenue. The FEMA Flood Study also indicates a similar 0.05% surface slope on Crystal Lake. The width of Crystal Lake likely dampens (reduces) the water surface slope of Crystal Lake. FEMA Cross Section "H" is near the location of the proposed stormwater detention basin. Therefore we utilized the flood elevations at FEMA Cross Section "H" to determine the probable elevation of stormwater in Manhole 12. We then calculated the Hydraulic Grade Line (HGL) within the proposed 15 inch diameter storm sewer that serves as the outlet for the proposed "off-site" stormwater detention basin (see Section 7).

As part of our analyses we calculated the stormwater storage volume provided and the peak rate of outflow from the proposed "off-site" stormwater detention basin assuming that the water surface elevation of the Saline Branch Creek was the limiting factor in determining basin outflow. Under Saline Branch Creek flooding conditions we found that the release rate from the proposed "off-site" stormwater detention basin is reduced, and total storage volume is increased, as compared to the standard design condition which assumes a free outlet for the proposed basin.

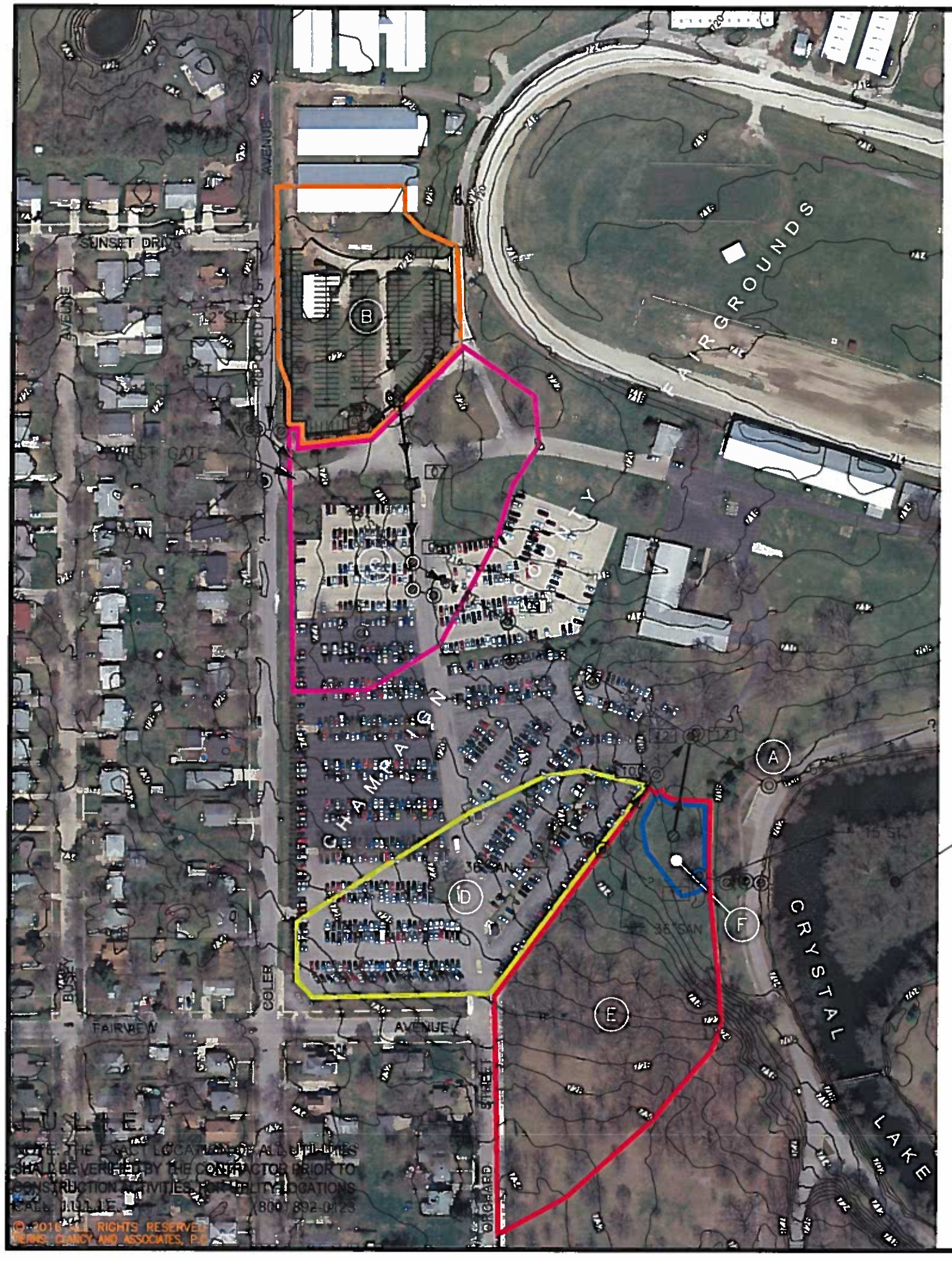
Our stormwater routing calculations in Section 7 of our Detention Basin Calculations for the proposed "off-site" detention basin indicate flood conditions do not impact the flow capacity of the proposed 15 inch diameter storm sewer during a 5 year return period storm event and during a 10 year return period storm event (see Page 7.01). Our calculations estimate a peak water surface elevation of 707.5 feet, a peak primary outflow rate of 5.0 cfs, and an average primary outlet flow of 3.5 cfs for a 50 year return period storm event (see Page 7.03). We also estimate a peak water surface elevation of 707.8 feet, a peak outflow rate of 8.3 cfs, and an average outlet flow of 4.9 cfs for a 100 year return period storm event (see Page 7.04). Project Inlet 11 will serve as an emergency overflow at a proposed rim elevation of 707.5 feet approximately the peak water surface elevation for a 50 year event and approximately 3-½ inch below the theoretical peak water surface elevation for a 100 year event.

SUMMARY

The proposed alternative "off-site" stormwater detention basin location would appear to be able to meet or exceed the stormwater detention requirements of the Champaign County Ordinance for the proposed parking expansion project. This alternative basin design offers the additional benefit of providing stormwater quality improvements to Crystal Lake which cannot be offered by new underground stormwater detention within or adjacent to the proposed parking lot (see Page 6.07). These stormwater quality improvements are due to the above ground, pervious, turf coveraged design of the alternative basin. The proposed design gives sediment and nutrients contained within the stormwater runoff from Drainage Area "D" and Drainage Area "E" to settle out into the proposed alternative basin and for the nutrients to be absorbed and utilized by the turf surface.

In summary, construction of a new 1.72 acre parking lot is proposed in the northwestern portion of the Champaign County fairgrounds. Construction of stormwater detention basin facilities for the proposed parking lot would involve building underground facilities due to site constraints. Construction of an alternative above ground detention basin which would serve a 2.76 acre parking lot is proposed in lieu of construction of the underground basin. The proposed alternative basin would also serve a total watershed area that is 2.8 times larger than the total watershed of the new parking lot. The net result is that the total volume of stormwater storage proposed for the alternative basin exceeds the volume of stormwater storage that would be required for the new parking lot alone. In addition, the total peak rate of flow of stormwater runoff from the total system is reduced by 30% for the 2 year return period storm event as compared to existing conditions. During the 50 year return period storm event the estimated reduction in the peak rate of flow of stormwater runoff is reduced by 45% as compared to existing conditions. In our opinion the stormwater management system proposed for the project meets or exceeds the intent of the Champaign County Stormwater Management Ordinance.

Detention Basin Calculations Index



NORTH

200 100 0 200

SCALE IN FEET

CHAMPAIGN COUNTY ORTHOPHOTOGRAPHY
DATED APRIL 2011
LiDAR TOPOGRAPHY DATED 2008

(A) EXISTING 54 INCH DIAMETER STORM SEWER DRAINS EASTERLY TO CRYSTAL LAKE SEDIMENT BASIN

(B) PROPOSED PARKING LOT DRAINAGE AREA 2.42 ACRES±

(C) FAIRGROUND AREA DRAINING TO EXISTING INLET 08
DRAINAGE AREA: 3.53 ACRES ±

(D) EXISTING PARKING LOT DRAINING TO PROPOSED STORMWATER DETENTION BASIN
DRAINAGE AREA: 2.76 ACRES ±

(E) EXISTING GRASS AND ROADS DRAINING TO PROPOSED STORMWATER DETENTION BASIN
DRAINAGE AREA: 4.13 ACRES ±

(F) PROPOSED STORMWATER DETENTION BASIN
DRAINAGE AREA: 0.29 ACRES ±

URBANA PARK DISTRICT
CRYSTAL LAKE PARK

LEGEND

- EXISTING STORM SEWER MANHOLE (OPEN LID)
- EXISTING STORM SEWER MANHOLE (CLOSED LID)
- EXISTING STORM SEWER CURB INLET
- EXISTING SANITARY SEWER MANHOLE
- –54"ST– EXISTING STORM SEWER LINE/SIZE (APPROXIMATE LOCATION)
- –36"SAN– EXISTING SANITARY SEWER LINE/SIZE (APPROXIMATE LOCATION)
- PROPOSED STORM SEWER INLET
- PROPOSED STORM SEWER LINE DIRECTION OF FLOW
- PROPOSED PARKING LOT DRAINAGE AREA "B"
- EXISTING PARKING LOT DRAINAGE AREA "C"
- EXISTING PARKING LOT DRAINAGE AREA "D"
- EXISTING GRASS AND ROADS DRAINAGE AREA "E"
- PROPOSED STORMWATER DETENTION BASIN DRAINAGE AREA "F"
- 07 BERNS, CLANCY AND ASSOCIATES MANHOLE/INLET DESIGNATION

Carle

STORMWATER MANAGEMENT PLAN
CARLE FOUNDATION HOSPITAL / CHAMPAIGN COUNTY FAIRGROUNDS PARKING LOT IMPROVEMENT SITE
URBANA TOWNSHIP, CHAMPAIGN COUNTY, ILLINOIS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

May 25, 2016

Rainfall Intensity - Urbana

Return Period	2 year Inch/Hour	5 year Inch/Hour	10 year Inch/Hour	25 year Inch/Hour	50 year Inch/Hour	100 year Inch/Hour
24 hours	0.13	0.15	0.18	0.21	0.24	0.28
18 hours	0.15	0.19	0.22	0.26	0.30	0.34
12 hours	0.22	0.27	0.31	0.37	0.42	0.48
6 hours	0.38	0.46	0.53	0.63	0.73	0.83
3 hours	0.64	0.79	0.91	1.07	1.25	1.41
2 hours	0.89	1.09	1.26	1.49	1.72	1.95
60 mins	1.41	1.74	2.00	2.39	2.74	3.11
30 mins	2.22	2.74	3.14	3.74	4.32	4.90
15 mins	3.24	4.00	4.56	5.48	6.40	7.40
10 mins	3.96	4.86	5.64	6.72	7.68	8.76
5 mins	4.32	5.28	6.12	7.32	8.40	9.48

* Bulletin 70, Appendix A: pg 107-122, dated 1989

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

May 25, 2016

Summary of Formulas

Surface Flow (Rational Method)

Sheet Flow		kinematic solution to Manning's equation $T_i=0.007*(n*L)^{0.8}/(P_2^{0.5}*S^{0.4})*60$ T_i=Initial Time n=Runoff Coefficient L=length of flow path P_2=2 year/24 hour rainfall S=slope
Shallow Flow		Tt=L/V T_t=Travel Time L=length of flow path V=velocity=$V_c*S^{0.5}$ V_c=constant = 16.1345 unpaved, = S=slope
Time of Concentration		$T_c=T_{t1}+T_{t2}+T_{t3}+T_{t4}$
Rainfall Runoff		R=K*c*I*A
	K factor	Adjustment factor for larger rainfall events =1.0 for 2 year, 5 year and 10 year events =1.1 for 25 year event =1.2 for 50 year event =1.25 for 100 year event
	c factor	rainfall runoff factor =0.25 for grass =0.95 for impervious surfaces
	I	rainfall intensity at time T_c
	A	Area of water shed
Orifice Flow		$O=C*A*(2*g*H)^{0.5}$ C=orifice constant = 0.6 A=area of orifice G=gravity constant = 32.2 H=height of surface above centroid of orifice
Weir Flow		$W=C*L*H^{1.5}$ C=weir constant = 3.0 L=weir length (perimeter) H=height of flow over weir
Detention Basin Volume		Q=max((R-O)*T) T=time

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Rainfall Runoff Calculations

May 25, 2016

Drainage Area "B" - Proposed Parking Lot Site - Existing Conditions

Initial Time for Sheet Flow

L	100	feet
n	0.25	(grass)
P2	3.10	
s	1.00%	
Ti	19.77	Minutes

Travel Time for Shallow Concentrated Flow

L	135	feet
s	1.00%	
factor	16.1345	unpaved
V	1.61	FPS
Tt	1.4	Minutes

L	135	feet
s	4.40%	
factor	16.1345	unpaved
V	3.38	FPS
Tt	0.7	Minutes

L	70	feet
s	2.00%	
factor	16.1345	unpaved
V	2.28	FPS
Tt	0.5	Minutes

Time of Concentration

Tc	22.3	Minutes

Current Conditions Runoff

Area		c	
0.27	acres±	0.95	Impervious
2.15	acres±	0.25	Pervious
2.42	acres	0.33	

Event	Intensity		K factor	Peak Runoff	
2	2.74	in/hr	1	2.2	CFS
5	3.38	in/hr	1	2.7	CFS
10	3.87	in/hr	1	3.1	CFS
25	4.63	in/hr	1.1	4.1	CFS
50	5.38	in/hr	1.2	5.2	CFS
100	6.18	in/hr	1.25	6.2	CFS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Rainfall Runoff Calculations

May 25, 2016

Drainage Area "B" - Proposed Parking Lot Site - Post Developement

Initial Time for Sheet Flow

L	100	feet
n	0.25	(grass)
P2	3.10	
s	1.00%	
Ti	19.77	Minutes

Travel Time for Shallow Concentrated Flow

L	60	feet
s	1.00%	
factor	20.3282	paved
V	2.03	FPS
Tt	0.5	Minutes

L	210	feet
s	3.50%	
factor	20.3282	paved
V	3.80	FPS
Tt	0.9	Minutes

L	70	feet
s	1.00%	
factor	20.3282	paved
V	2.03	FPS
Tt	0.6	Minutes

Time of Concentration

Tc	21.8	Minutes

Proposed post development runoff

Area		c	
1.72	acres±	0.95	Impervious
0.70	acres±	0.25	Pervious
2.42	acres±	0.75	

Event	Intensity		K factor	Peak Runoff	
2	2.78	in/hr	1	5.0	CFS
5	3.43	in/hr	1	6.2	CFS
10	3.92	in/hr	1	7.1	CFS
25	4.70	in/hr	1.1	9.4	CFS
50	5.46	in/hr	1.2	11.9	CFS
100	6.27	in/hr	1.25	14.2	CFS

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STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Rainfall Runoff Calculations

May 25, 2016

Drainage Area "B" - Proposed Parking Lot Site
- Post Development - Parking Lot Only

Initial Time for Sheet Flow

L	60	feet
n	0.25	(grass)
P2	3.10	
s	1.00%	
Ti	13.14	Minutes

Travel Time for Shallow Concentrated Flow

L	210	feet
s	3.50%	
factor	20.3282	paved
V	3.80	FPS
Tt	0.9	Minutes

L	70	feet
s	1.00%	
factor	20.3282	paved
V	2.03	FPS
Tt	0.6	Minutes

Time of Concentration

Tc	14.6	Minutes	calculated
Tc	15.0	Minutes	for runoff calculations

Proposed post development runoff - Parking Lot Only

Area		c	
1.72	acres±	0.95	Impervious

Event	Intensity		K factor	Peak Runoff	
2	3.24	in/hr	1	5.3	CFS
5	4.00	in/hr	1	6.5	CFS
10	4.56	in/hr	1	7.5	CFS
25	5.48	in/hr	1.05	9.4	CFS
50	6.40	in/hr	1.05	11.0	CFS
100	7.40	in/hr	1.05	12.7	CFS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Rainfall Runoff Calculations

May 25, 2016

Drainage Area "C" - Area Draining to Inlet 08

Initial Time for Sheet Flow

L	60	feet
n	0.25	(grass)
P2	3.10	
s	1.00%	
Ti	13.14	Minutes

Travel Time for Shallow Concentrated Flow

L	40	feet
s	1.00%	
factor	20.3282	paved
V	2.03	FPS
Tt	0.3	Minutes
L	200	feet
s	2.00%	
factor	16.1345	unpaved
V	2.28	FPS
Tt	1.5	Minutes
L	40	feet
s	1.00%	
factor	20.3282	paved
V	2.03	FPS
Tt	0.3	Minutes

Time of Concentration

Tc	15.3	Minutes	
Tc	15.0	Minutes	for runoff calculations

Existing Runoff

Area		c	
3.53	acres±	0.95	Impervious
1.15	acres±	0.25	Pervious
4.68	acres	0.78	

Event	Intensity		K factor	Peak Runoff	
2	3.24	in/hr	1	11.8	CFS
5	4.00	in/hr	1	14.6	CFS
10	4.56	in/hr	1	16.6	CFS
25	5.48	in/hr	1.1	22.0	CFS
50	6.40	in/hr	1.2	28.0	CFS
100	7.40	in/hr	1.25	33.8	CFS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Rainfall Runoff Calculations

May 25, 2016

May 25, 2016

Drainage Area "D" and "E" - Existing Parking Lot Site / Alternate Storm Water Detention Area - Pre-Development

Initial Time for Sheet Flow

L	100	feet
n	0.25	(grass)
P2	3.10	
s	2.00%	
Ti	14.98	Minutes

Travel Time for Shallow Concentrated Flow

L	450	feet
s	4.00%	
factor	16.1345	unpaved
V	3.23	FPS
Tt	2.3	Minutes

Travel Time for Shallow Concentrated Flow

L	150	feet
s	10.00%	
factor	16.1345	unpaved
V	5.10	FPS
Tt	0.5	Minutes

Time of Concentration

Tc	17.8	Minutes	calculated

Alternate Site runoff - Assume Grass Only

Area		c
6.89	acres±	0.25

Event	Intensity		K factor	Peak Runoff	
2	3.05	in/hr	1	5.3	CFS
5	3.77	in/hr	1	6.5	CFS
10	4.30	in/hr	1	7.4	CFS
25	5.16	in/hr	1.1	9.8	CFS
50	6.01	in/hr	1.2	12.4	CFS
100	6.93	in/hr	1.25	14.9	CFS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Rainfall Runoff Calculations

May 25, 2016

Drainage Area "D" and "E" - Existing Parking Lot Site / Alternate Storm Water Detention Area - Post Development (Existing Conditions)

Initial Time for Sheet Flow

L	100	feet
n	0.25	(grass)
P2	3.10	
s	4.00%	
Ti	11.35	Minutes

Travel Time for Shallow Concentrated Flow

L	540	feet
s	2.00%	
factor	16.1345	unpaved
V	2.28	FPS
Tt	3.9	Minutes

Time of Concentration

Tc	15.3	Minutes	calculated
Tc	15.0	Minutes	for runoff calculations

Alternate Site runoff - post development

Area		c	
2.76	acres±	0.95	Impervious
0.29	acres±	0.95	Storm Water Detention Basin
3.84	acres±	0.25	Pervious
6.89	acres±	0.56	

Event	Intensity		K factor	Peak Runoff	
2	3.24	in/hr	1	12.5	CFS
5	4.00	in/hr	1	15.4	CFS
10	4.56	in/hr	1	17.6	CFS
25	5.48	in/hr	1.1	23.3	CFS
50	6.40	in/hr	1.2	29.6	CFS
100	7.40	in/hr	1.25	35.7	CFS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Rainfall Runoff Calculations

May 25, 2016

Drainage Area "D" and "E" - Existing Parking Lot Site
/ Alternate Storm Water Detention Area - Post Development - Parking Lot Only

Initial Time for Sheet Flow

L	200	feet
n	0.013	(pavement)
P2	3.10	
s	2.00%	
Ti	2.45	Minutes

Travel Time for Shallow Concentrated Flow

L	430	feet
s	2.00%	
factor	20.3282	paved
V	2.87	FPS
Tt	2.5	Minutes

Time of Concentration

Tc	4.9	Minutes	calculated
Tc	5.0	Minutes	for runoff calculations

Alternate Site runoff - Parking Lot Only

Area		c	
2.76	acres±	0.95	Impervious
0.29	acres±	0.95	Storm Water Detention Basin
3.05	acres±	0.95	

Event	Intensity		K factor	Peak Runoff	
2	4.32	in/hr	1	12.5	CFS
5	5.28	in/hr	1	15.3	CFS
10	6.12	in/hr	1	17.7	CFS
25	7.32	in/hr	1.05	22.3	CFS
50	8.40	in/hr	1.05	25.6	CFS
100	9.48	in/hr	1.05	28.9	CFS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Rainfall Runoff Calculations

May 25, 2016

Drainage Area "E" - Existing Parking Lot Site
/ Alternate Storm Water Detention Area - Post Development - Grass Area Only

Initial Time for Sheet Flow

L	100	feet
n	0.25	(grass)
P2	3.10	
s	2.00%	
Ti	14.98	Minutes

Travel Time for Shallow Concentrated Flow

L	450	feet
s	4.00%	
factor	16.1345	unpaved
V	3.23	FPS
Tt	2.3	Minutes

Travel Time for Shallow Concentrated Flow

L	150	feet
s	10.00%	
factor	16.1345	unpaved
V	5.10	FPS
Tt	0.5	Minutes

Time of Concentration

Tc	17.8	Minutes	calculated

Alternate Site runoff - Grass Area Only

Area		c
4.13	acres±	0.25

Event	Intensity		K factor	Peak Runoff	
2	3.05	in/hr	1	3.1	CFS
5	3.77	in/hr	1	3.9	CFS
10	4.30	in/hr	1	4.4	CFS
25	5.16	in/hr	1.1	5.9	CFS
50	6.01	in/hr	1.2	7.4	CFS
100	6.93	in/hr	1.25	8.9	CFS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Rainfall Runoff Calculations

May 25, 2016

Outflow Calculation Summary

Existing Conditions

Storm Event	Drainage Area "B"	Drainage Area "D" Area "E"	Total Outflow
2	2.2	12.5	14.7 CFS
5	2.7	15.4	18.1 CFS
10	3.1	17.6	20.7 CFS
25	4.1	23.3	27.3 CFS
50	5.2	29.6	34.8 CFS
100	6.2	35.7	41.8 CFS

Proposed Conditions

Storm Event	Drainage Area "B"	Drainage Area "D" Area "E"	Total Outflow
2	5.0	4.4	9.5 CFS
5	6.2	4.7	10.9 CFS
10	7.1	4.9	12.0 CFS
25	9.4	5.3	14.7 CFS
50	11.9	5.6	17.5 CFS
100	14.2	6.8	21.0 CFS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Rainfall Runoff Calculations

May 25, 2016

Permitted Flow Summary

Parking Lot Site B

Drainage Area "B" - Proposed Parking Lot Site - Existing Conditions

5-year event - Page 2.01	2.7	CFS
Peak Permitted Flow - 50-year event	2.7	CFS

Alternative Site

Drainage Area "D" and "E" - Existing Parking Lot Site / Alternate Storm Water Detention Area - Pre-Development

5-year event - Page 2.05	6.5	CFS
Peak Permitted Flow - 50-year event	6.5	CFS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Outflow Calculations

May 25, 2016

Parking Lot Site B (2.02)

Theoretical underground detention 72 feet square and 4 feet high.
With orifice outlet control. Volume 20,736 cubic feet.

Primary Outlet
(7.3 inch diameter Orifice)

Orfice coefficient (C)	0.6
Orifice diameter	7.25 inches (7-1/4 inches)
Orifice centroid	0.30 feet
Orifice area (A)	0.29 square feet

Peak Surface Elevation (H)	Average Orifice Flow	Peak Orifice Flow
0.0 Feet	0.0 CFS	0.0 CFS
0.5 Feet	0.4 CFS	0.6 CFS
1.0 Feet	0.8 CFS	1.2 CFS
1.5 Feet	1.1 CFS	1.5 CFS
2.0 Feet	1.3 CFS	1.8 CFS
2.5 Feet	1.4 CFS	2.0 CFS
3.0 Feet	1.6 CFS	2.3 CFS
3.5 Feet	1.7 CFS	2.5 CFS
4.0 Feet	1.9 CFS	2.7 CFS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Outflow Calculations

May 25, 2016

Alternative Site (2.06)

Primary Outlet

Orifice at Project Inlet 20

Orifice coefficient	0.6
Orifice diameter	10.25 inches (10-1/4 inches)
Flow line out	702.6 feet
Orifice centroid	703.03 feet
Orifice area	0.57 square feet
Inlet Rim Elevation	704.00 feet

Peak Surface Elevation	Peak Orifice Flow
704.0 Feet	2.7 CFS
704.5 Feet	3.3 CFS
705.0 Feet	3.9 CFS
705.5 Feet	4.3 CFS
706.0 Feet	4.8 CFS
706.5 Feet	5.1 CFS
707.0 Feet	5.5 CFS
707.5 Feet	5.8 CFS
708.0 Feet	6.2 CFS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Outflow Calculations

May 25, 2016

Alternative Site (2.06)

Secondary Outlet

Neehah R-4342 casting at Project Inlet 11

Weir coefficient	3.0
Perimeter of Weir	6.0 feet
Rim Elevation	707.5 feet
Surface Area	2.0 square feet

Peak Surface Elevation		Peak Weir Flow	
707.50	Feet	0	CFS
707.55	Feet	0.2	CFS
707.60	Feet	0.6	CFS
707.65	Feet	1.0	CFS
707.70	Feet	1.6	CFS

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
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Detention Basin Volume Calculations

May 25, 2016

Parking Lot Site B (2.02)

Theoretical underground detention basin 72 feet square and 4 feet high

Depth Feet	Basin Volume	
0.0	0	Cubic Feet
0.5	2,592	Cubic Feet
1.0	5,184	Cubic Feet
1.5	7,776	Cubic Feet
2.0	10,368	Cubic Feet
2.5	12,960	Cubic Feet
3.0	15,552	Cubic Feet
3.5	18,144	Cubic Feet
4.0	20,736	Cubic Feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Detention Basin Volume Calculations

Alternative Site (2.06)

Surface Elevation Feet	Surface Area Square Feet	Incremental Volume Cubic Feet	Basin Volume Cubic Feet
704.0	0	0	0
704.5	2,290	573	573
705.0	8,008	2,575	3,147
705.5	10,842	4,713	7,860
706.0	12,800	5,911	13,770
706.5	14,721	6,880	20,650
707.0	16,599	7,830	28,480
707.5	17,807	8,602	37,082
707.75	18,400	4,526	41,608
708.0	19,000	4,675	46,283

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
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Detention Basin Volume Calculations

Detention Basin Volume Calculation

Existing Flood Plain volume displaced by proposed Off-Site Detention Basin

Surface Elevation Feet	Surface Area Square Feet	Incremental Volume Cubic Feet	Basin Volume Cubic Feet
704.5	0	0	0
705.0	420	105	105
706.0	7,266	3,843	3,948
707.0	13,872	10,569	14,517

Existing Flood Plain Volume	14,517
Theoretical Detention Basin Volume 50 year rain fall event (5.05)	17,464
Minimum Required Capacity for Off-Site Detention Basin	31,981
Proposed Capacity for Off-Site Detention Basin Surface Elevation 707.25 feet	32,800
Proposed Capacity for Off-Site Detention Basin Surface Elevation 707.5 feet	37,080

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Storm Water Detention Basin Volume Calculations
Parking Lot Site B

May 25, 2016

2 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Orifice Flow CFS	Detention Volume Cubic Feet
15	3.24	5.88	0.83	4,550
18	3.04	5.51	0.83	5,060
21	2.83	5.14	0.83	5,437
24	2.63	4.77	0.83	5,680
27	2.42	4.40	0.83	5,791
30	2.22	4.03	0.83	5,767
33	2.14	3.88	0.83	6,053
36	2.06	3.74	0.83	6,286
39	1.98	3.59	0.83	6,466
42	1.90	3.44	0.83	6,593
45	1.82	3.29	0.83	6,667
48	1.73	3.15	0.83	6,688
51	1.65	3.00	0.83	6,656
54	1.57	2.85	0.83	6,571
57	1.49	2.71	0.83	6,433
60	1.41	2.56	0.83	6,242

Water Surface Elevation	1.32 feet
Average Outlet Flow	0.83 cfs
Peak Outlet Flow	1.59 cfs
Peak Basin Volume	6,837 cubic feet
	0.16 acre feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Storm Water Detention Basin Volume Calculations
Parking Lot Site B

May 25, 2016

5 Year Rainfall Event

Time Period	Rainfall Intensity	Calc. Runoff	Average Orifice Flow	Detention Volume
15	4.00	7.26	1.01	5,621
18	3.75	6.80	1.01	6,252
21	3.50	6.35	1.01	6,717
24	3.24	5.89	1.01	7,018
27	2.99	5.43	1.01	7,154
30	2.74	4.97	1.01	7,126
33	2.64	4.79	1.01	7,479
36	2.54	4.61	1.01	7,767
39	2.44	4.43	1.01	7,990
42	2.34	4.25	1.01	8,147
45	2.24	4.07	1.01	8,239
48	2.14	3.88	1.01	8,265
51	2.04	3.70	1.01	8,227
54	1.94	3.52	1.01	8,123
57	1.84	3.34	1.01	7,953
60	1.74	3.16	1.01	7,718

Water Surface Elevation	1.68 feet
Average Outlet Flow	1.01 cfs
Peak Outlet Flow	1.79 cfs
Peak Basin Volume	8,728 cubic feet
	0.20 acre feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Storm Water Detention Basin Volume Calculations
Parking Lot Site B

May 25, 2016

10 Year Rainfall Event

Time Period	Rainfall Intensity	Calc. Runoff	Average Orifice Flow	Detention Volume
15	4.56	8.28	1.12	6,441
18	4.28	7.76	1.12	7,173
21	3.99	7.25	1.12	7,719
24	3.71	6.73	1.12	8,079
27	3.42	6.21	1.12	8,254
30	3.14	5.70	1.12	8,243
33	3.03	5.49	1.12	8,658
36	2.91	5.29	1.12	8,998
39	2.80	5.08	1.12	9,264
42	2.68	4.87	1.12	9,455
45	2.57	4.66	1.12	9,572
48	2.46	4.46	1.12	9,614
51	2.34	4.25	1.12	9,582
54	2.23	4.04	1.12	9,475
57	2.11	3.84	1.12	9,294
60	2.00	3.63	1.12	9,038

Water Surface Elevation	1.92 feet
Average Outlet Flow	1.12 cfs
Peak Outlet Flow	1.91 cfs
Peak Basin Volume	9,950 cubic feet
	0.23 acre feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Storm Water Detention Basin Volume Calculations
Parking Lot Site B

May 25, 2016

25 Year Rainfall Event

Time Period	Rainfall Intensity	Calc. Runoff	Average Orifice Flow	Detention Volume
15	5.48	10.94	1.38	8,605
18	5.13	10.25	1.38	9,576
21	4.78	9.55	1.38	10,296
24	4.44	8.86	1.38	10,767
27	4.09	8.16	1.38	10,987
30	3.74	7.47	1.38	10,957
33	3.61	7.20	1.38	11,519
36	3.47	6.93	1.38	11,984
39	3.34	6.66	1.38	12,352
42	3.20	6.39	1.38	12,623
45	3.07	6.12	1.38	12,797
48	2.93	5.85	1.38	12,874
51	2.80	5.58	1.38	12,854
54	2.66	5.31	1.38	12,737
57	2.53	5.04	1.38	12,523
60	2.39	4.77	1.38	12,212

K factor	1.10	
Water Surface Elevation	2.60	feet
Average Outlet Flow	1.38	cfs
Peak Outlet Flow	2.23	cfs
Peak Basin Volume	13,486	cubic feet
	0.31	acre feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Storm Water Detention Basin Volume Calculations
Parking Lot Site B

May 25, 2016

50 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Orifice Flow CFS	Detention Volume Cubic Feet
15	6.40	13.94	1.62	11,085
18	5.98	13.03	1.62	12,323
21	4.78	10.42	1.62	11,084
24	4.44	9.66	1.62	11,576
27	4.09	8.90	1.62	11,795
30	4.32	9.41	1.62	14,015
33	4.16	9.06	1.62	14,735
36	4.00	8.72	1.62	15,331
39	3.85	8.38	1.62	15,804
42	3.69	8.03	1.62	16,152
45	3.53	7.69	1.62	16,377
48	3.37	7.34	1.62	16,477
51	3.21	7.00	1.62	16,454
54	3.06	6.66	1.62	16,307
57	2.90	6.31	1.62	16,036
60	2.74	5.97	1.62	15,641

K factor	1.20
Water Surface Elevation	3.37 feet
Average Outlet Flow	1.62 cfs
Peak Outlet Flow	2.53 cfs
Peak Basin Volume	17,464 cubic feet
	0.40 acre feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Storm Water Detention Basin Volume Calculations
Parking Lot Site B

May 25, 2016

100 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Orifice Flow CFS	Detention Volume Cubic Feet
15	7.40	16.79	1.84	13,450
18	6.90	15.65	1.84	14,915
21	6.40	14.52	1.84	15,972
24	5.90	13.39	1.84	16,620
27	5.40	12.25	1.84	16,860
30	4.90	11.12	1.84	16,691
33	4.72	10.71	1.84	17,556
36	4.54	10.30	1.84	18,275
39	4.36	9.90	1.84	18,848
42	4.18	9.49	1.84	19,274
45	4.01	9.09	1.84	19,554
48	3.83	8.68	1.84	19,688
51	3.65	8.27	1.84	19,676
54	3.47	7.87	1.84	19,518
57	3.29	7.46	1.84	19,213
60	3.11	7.06	1.84	18,762

K factor	1.25	
Water Surface Elevation	4.06	feet
Average Outlet Flow	1.81	cfs
Peak Outlet Flow	2.78	cfs
Peak Basin Volume	21,038	cubic feet
	0.48	acre feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Storm Water Detention Basin Volume Calculations
Parking Lot Site B

May 25, 2016

Summary

	Permitted Flow (2.01) CFS	Average Outlet Flow CFS	Peak Outlet Flow CFS	Peak Storage Volume acre feet
2 Year Rainfall Event	2.2	0.8	1.6	0.16
5 Year Rainfall Event	2.7	1.0	1.8	0.20
10 Year Rainfall Event	2.7	1.1	1.9	0.23
25 Year Rainfall Event	2.7	1.4	2.2	0.31
50 Year Rainfall Event	2.7	1.6	2.5	0.40
100 Year Rainfall Event	2.7	1.8	2.8	0.48

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
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Storm Water Detention Basin Volume Calculations
Alternate Site D and Site E

May 25, 2016

2 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Basin Flow CFS	Detention Volume Cubic Feet
15	3.24	12.50	3.68	7,932
18	3.04	11.71	3.68	8,669
21	2.83	10.92	3.68	9,122
24	2.63	10.14	3.68	9,292
27	2.42	9.35	3.68	9,179
30	2.22	8.56	3.68	8,782
33	2.14	8.25	3.68	9,042
36	2.06	7.94	3.68	9,189
39	1.98	7.63	3.68	9,223
42	1.90	7.31	3.68	9,145
45	1.82	7.00	3.68	8,955
48	1.73	6.69	3.68	8,652
51	1.65	6.38	3.68	8,237
54	1.57	6.06	3.68	7,709
57	1.49	5.75	3.68	7,069
60	1.41	5.44	3.68	6,316

Water Surface Elevation	705.62 feet
Average Outlet Flow	3.68 cfs
Peak Outlet Flow	4.44 cfs
Peak Basin Volume	9,292 cubic feet
	0.21 acre feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
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Storm Water Detention Basin Volume Calculations
Alternate Site D and Site E

May 25, 2016

5 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Basin Flow CFS	Detention Volume Cubic Feet
15	4.00	15.43	3.85	10,426
18	3.75	14.46	3.85	11,461
21	3.50	13.49	3.85	12,147
24	3.24	12.51	3.85	12,482
27	2.99	11.54	3.85	12,467
30	2.74	10.57	3.85	12,103
33	2.64	10.18	3.85	12,549
36	2.54	9.80	3.85	12,857
39	2.44	9.41	3.85	13,026
42	2.34	9.03	3.85	13,056
45	2.24	8.64	3.85	12,947
48	2.14	8.26	3.85	12,699
51	2.04	7.87	3.85	12,312
54	1.94	7.48	3.85	11,787
57	1.84	7.10	3.85	11,122
60	1.74	6.71	3.85	10,319

Water Surface Elevation	705.94	feet
Average Outlet Flow	3.85	cfs
Peak Outlet Flow	4.71	cfs
Peak Basin Volume	13,056	cubic feet
	0.30	acre feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
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Storm Water Detention Basin Volume Calculations
Alternate Site D and Site E

May 25, 2016

10 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Basin Flow CFS	Detention Volume Cubic Feet
15	4.56	17.59	3.97	12,258
18	4.28	16.49	3.97	13,526
21	3.99	15.40	3.97	14,400
24	3.71	14.30	3.97	14,880
27	3.42	13.21	3.97	14,965
30	3.14	12.11	3.97	14,656
33	3.03	11.67	3.97	15,251
36	2.91	11.23	3.97	15,687
39	2.80	10.79	3.97	15,965
42	2.68	10.35	3.97	16,085
45	2.57	9.91	3.97	16,047
48	2.46	9.47	3.97	15,850
51	2.34	9.03	3.97	15,495
54	2.23	8.59	3.97	14,982
57	2.11	8.15	3.97	14,310
60	2.00	7.72	3.97	13,480

Water Surface Elevation	706.20 feet
Average Outlet Flow	3.97 cfs
Peak Outlet Flow	4.91 cfs
Peak Basin Volume	16,085 cubic feet
	0.37 acre feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
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Storm Water Detention Basin Volume Calculations
Alternate Site D and Site E

May 25, 2016

25 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Basin Flow CFS	Detention Volume Cubic Feet
15	5.48	23.25	4.20	17,144
18	5.13	21.78	4.20	18,977
21	4.78	20.30	4.20	20,280
24	4.44	18.82	4.20	21,051
27	4.09	17.35	4.20	21,290
30	3.74	15.87	4.20	20,997
33	3.61	15.30	4.20	21,963
36	3.47	14.72	4.20	22,722
39	3.34	14.15	4.20	23,275
42	3.20	13.58	4.20	23,622
45	3.07	13.01	4.20	23,763
48	2.93	12.43	4.20	23,697
51	2.80	11.86	4.20	23,425
54	2.66	11.29	4.20	22,947
57	2.53	10.71	4.20	22,263
60	2.39	10.14	4.20	21,372

K factor	1.10	
Water Surface Elevation	706.70	feet
Average Outlet Flow	4.20	cfs
Peak Outlet Flow	5.29	cfs
Peak Basin Volume	23,763	cubic feet
	0.55	acre feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
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Storm Water Detention Basin Volume Calculations
Alternate Site D and Site E

May 25, 2016

50 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Orifice Flow CFS	Detention Volume Cubic Feet
15	6.40	29.63	4.43	22,674
18	5.98	27.70	4.43	25,129
21	4.78	22.15	4.43	22,318
24	4.44	20.53	4.43	23,187
27	4.09	18.92	4.43	23,475
30	4.32	20.00	4.43	28,017
33	4.16	19.27	4.43	29,370
36	4.00	18.53	4.43	30,461
39	3.85	17.80	4.43	31,288
42	3.69	17.07	4.43	31,851
45	3.53	16.34	4.43	32,152
48	3.37	15.61	4.43	32,189
51	3.21	14.88	4.43	31,962
54	3.06	14.15	4.43	31,473
57	2.90	13.41	4.43	30,720
60	2.74	12.68	4.43	29,704

K factor	1.20	
Water Surface Elevation	707.22	feet
Average Outlet Flow	4.43	cfs
Peak Outlet Flow	5.65	cfs
Peak Basin Volume	32,189	cubic feet
	0.74	acre feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
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Storm Water Detention Basin Volume Calculations
Alternate Site D and Site E

May 25, 2016

100 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Basin Flow CFS	Detention Volume Cubic Feet
15	7.40	35.68	4.92	27,689
18	6.90	33.27	4.92	30,623
21	6.40	30.86	4.92	32,689
24	5.90	28.45	4.92	33,887
27	5.40	26.04	4.92	34,217
30	4.90	23.63	4.92	33,679
33	4.72	22.76	4.92	35,338
36	4.54	21.90	4.92	36,686
39	4.36	21.04	4.92	37,724
42	4.18	20.17	4.92	38,451
45	4.01	19.31	4.92	38,867
48	3.83	18.45	4.92	38,972
51	3.65	17.59	4.92	38,767
54	3.47	16.72	4.92	38,251
57	3.29	15.86	4.92	37,424
60	3.11	15.00	4.92	36,286

K factor	1.25
Water Surface Elevation	707.63 feet
Average Orifice Flow	4.61 cfs
Average Weir Flow	0.31 cfs
Peak Orifice Flow	5.92 cfs
Peak Weir Flow	0.87 cfs
Peak Outflow	6.79 cfs
Peak Basin Volume	39,525 cubic feet
	0.91 acre feet

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
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Storm Water Detention Basin Volume Calculations
Alternate Site D and Site E

May 25, 2016

Summary

	Permitted Flow (2.08)	Average Outlet Flow CFS	Peak Outlet Flow CFS	Peak Storage Volume acre feet
2 Year Rainfall Event	5.3	3.7	4.4	0.21
5 Year Rainfall Event	6.5	3.8	4.7	0.30
10 Year Rainfall Event	6.5	4.0	4.9	0.37
25 Year Rainfall Event	6.5	4.2	5.3	0.55
50 Year Rainfall Event	6.5	4.4	5.6	0.74
100 Year Rainfall Event		4.6	6.8	0.91

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CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Storm Sewer Calculations

May 25, 2016

10 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Basin Flow CFS	Detention Volume Cubic Feet
15	4.56	21.11	4.40	15,037
18	4.28	19.79	4.40	16,625
21	3.99	18.48	4.40	17,739
24	3.71	17.16	4.40	18,381
27	3.42	15.85	4.40	18,549
30	3.14	14.54	4.40	18,243
33	3.03	14.01	4.40	19,023
36	2.91	13.48	4.40	19,612
39	2.80	12.95	4.40	20,012
42	2.68	12.42	4.40	20,221
45	2.57	11.90	4.40	20,241
48	2.46	11.37	4.40	20,070
51	2.34	10.84	4.40	19,710
54	2.23	10.31	4.40	19,159
57	2.11	9.79	4.40	18,419
60	2.00	9.26	4.40	17,489

K factor	1.20	
Saline Branch Flood Elevation	705.5	feet
HGL slope	0.91%	
Water Surface Elevation	707.04	feet
Average Outlet Flow	4.40	cfs
Peak Outlet Flow	6.20	cfs *
Peak Basin Volume	20,241	cubic feet
	0.46	acre feet

* Orifice Flow is limiting factor see Page 6.03

CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Storm Sewer Calculations

25 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Basin Flow CFS	Detention Volume Cubic Feet
60	2.39	11.06	3.60	26,868
63	2.35	10.86	3.60	27,424
66	2.30	10.65	3.60	27,905
69	2.26	10.44	3.60	28,311
72	2.21	10.23	3.60	28,642
75	2.17	10.02	3.60	28,898
78	2.12	9.81	3.60	29,079
81	2.08	9.61	3.60	29,185
84	2.03	9.40	3.60	29,216
87	1.99	9.19	3.60	29,172
90	1.94	8.98	3.60	29,053
93	1.90	8.77	3.60	28,860
96	1.85	8.56	3.60	28,591
99	1.81	8.36	3.60	28,247
102	1.76	8.15	3.60	27,828
105	1.72	7.94	3.60	27,334
108	1.67	7.73	3.60	26,765
111	1.63	7.52	3.60	26,121
114	1.58	7.31	3.60	25,403
117	1.54	7.11	3.60	24,609
120	1.49	6.90	3.60	23,740

K factor	1.20	
Saline Branch Flood Elevation	706.0	feet
HGL slope	0.61%	
Water Surface Elevation	707.04	feet
Average Outlet Flow	3.60	cfs
Peak Outlet Flow	4.11	cfs
Peak Basin Volume	29,216	cubic feet
	0.67	acre feet

CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Storm Sewer Calculations

50 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Basin Flow CFS	Detention Volume Cubic Feet
60	2.74	12.68	3.50	33,060
63	2.69	12.45	3.50	33,821
66	2.64	12.21	3.50	34,497
69	2.59	11.98	3.50	35,087
72	2.54	11.74	3.50	35,593
75	2.49	11.50	3.50	36,014
78	2.43	11.27	3.50	36,349
81	2.38	11.03	3.50	36,600
84	2.33	10.79	3.50	36,766
87	2.28	10.56	3.50	36,847
90	2.23	10.32	3.50	36,842
93	2.18	10.09	3.50	36,753
96	2.13	9.85	3.50	36,579
99	2.08	9.61	3.50	36,320
102	2.03	9.38	3.50	35,976
105	1.98	9.14	3.50	35,546
108	1.92	8.91	3.50	35,032
111	1.87	8.67	3.50	34,433
114	1.82	8.43	3.50	33,749
117	1.77	8.20	3.50	32,980
120	1.72	7.96	3.50	32,126

K factor	1.20	
Saline Branch Flood Elevation	706.5	feet
HGL slope	0.58%	
Water Surface Elevation	707.49	feet
Average Outlet Flow	3.50	cfs
Peak Outlet Flow	5.00	cfs
Peak Basin Volume	36,847	cubic feet
	0.85	acre feet

CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Storm Sewer Calculations

100 Year Rainfall Event

Time Period Min.	Rainfall Intensity Inch/Hour	Calc. Runoff CFS	Average Basin Flow CFS	Detention Volume Cubic Feet
60	3.11	15.00	4.85	36,526
63	3.05	14.72	4.85	37,295
66	2.99	14.44	4.85	37,963
69	2.94	14.16	4.85	38,531
72	2.88	13.88	4.85	38,998
75	2.82	13.60	4.85	39,365
78	2.76	13.32	4.85	39,630
81	2.70	13.04	4.85	39,795
84	2.65	12.76	4.85	39,860
87	2.59	12.48	4.85	39,823
90	2.53	12.20	4.85	39,686
93	2.47	11.92	4.85	39,449
96	2.41	11.64	4.85	39,110
99	2.36	11.36	4.85	38,671
102	2.30	11.08	4.85	38,132
105	2.24	10.80	4.85	37,491
108	2.18	10.52	4.85	36,750
111	2.12	10.24	4.85	35,908
114	2.07	9.96	4.85	34,966
117	2.01	9.68	4.85	33,923
120	1.95	9.40	4.85	32,779

K factor	1.25
Saline Branch Flood Elevation	706.7 feet
HGL slope	0.65%
Water Surface Elevation	707.81 feet
Average Pipe Flow	3.76 cfs
Average Weir Flow	1.08 cfs
Average Outlet Flow	4.85 cfs
Peak Pipe Flow	5.21 cfs
Peak Weir Flow	3.06 cfs
Peak Outflow	8.27 cfs
Peak Basin Volume	39,860 cubic feet
	0.92 acre feet

CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
Champaign County, Illinois

Storm Sewer Calculations

Summary

	Permitted Flow (2.08)	Average Outlet Flow	Peak Outlet Flow	Peak Storage Volume acre feet
10 Year Rainfall Event	6.5	See Page 6.03		
25 Year Rainfall Event	6.5	3.6	4.1	0.67
50 Year Rainfall Event	6.5	3.5	5.0	0.85
100 Year Rainfall Event		4.9	8.3	0.92

CHAMPAIGN COUNTY FAIRGROUND
STORM WATER MANAGEMENT

Urbana Township,
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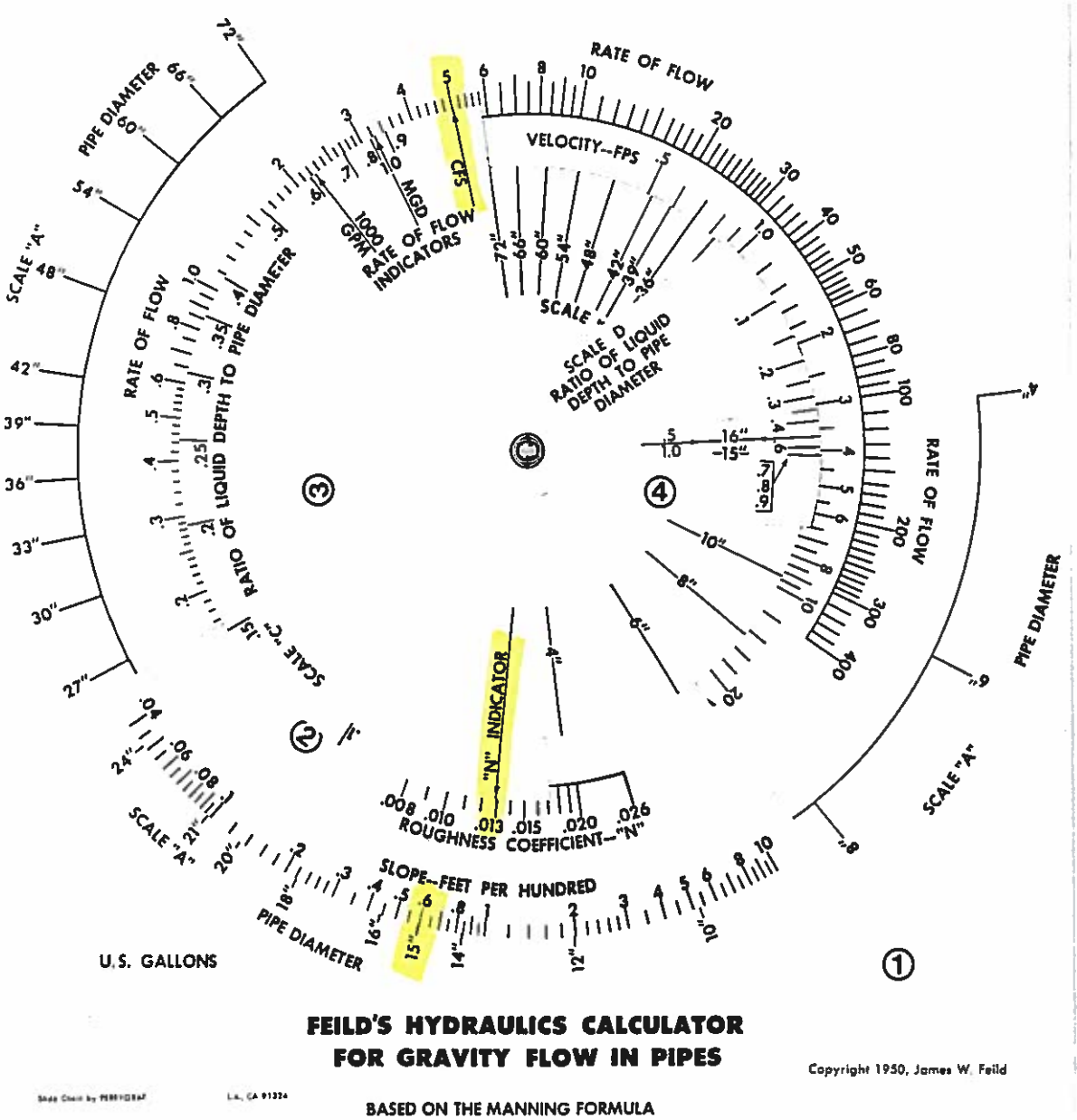
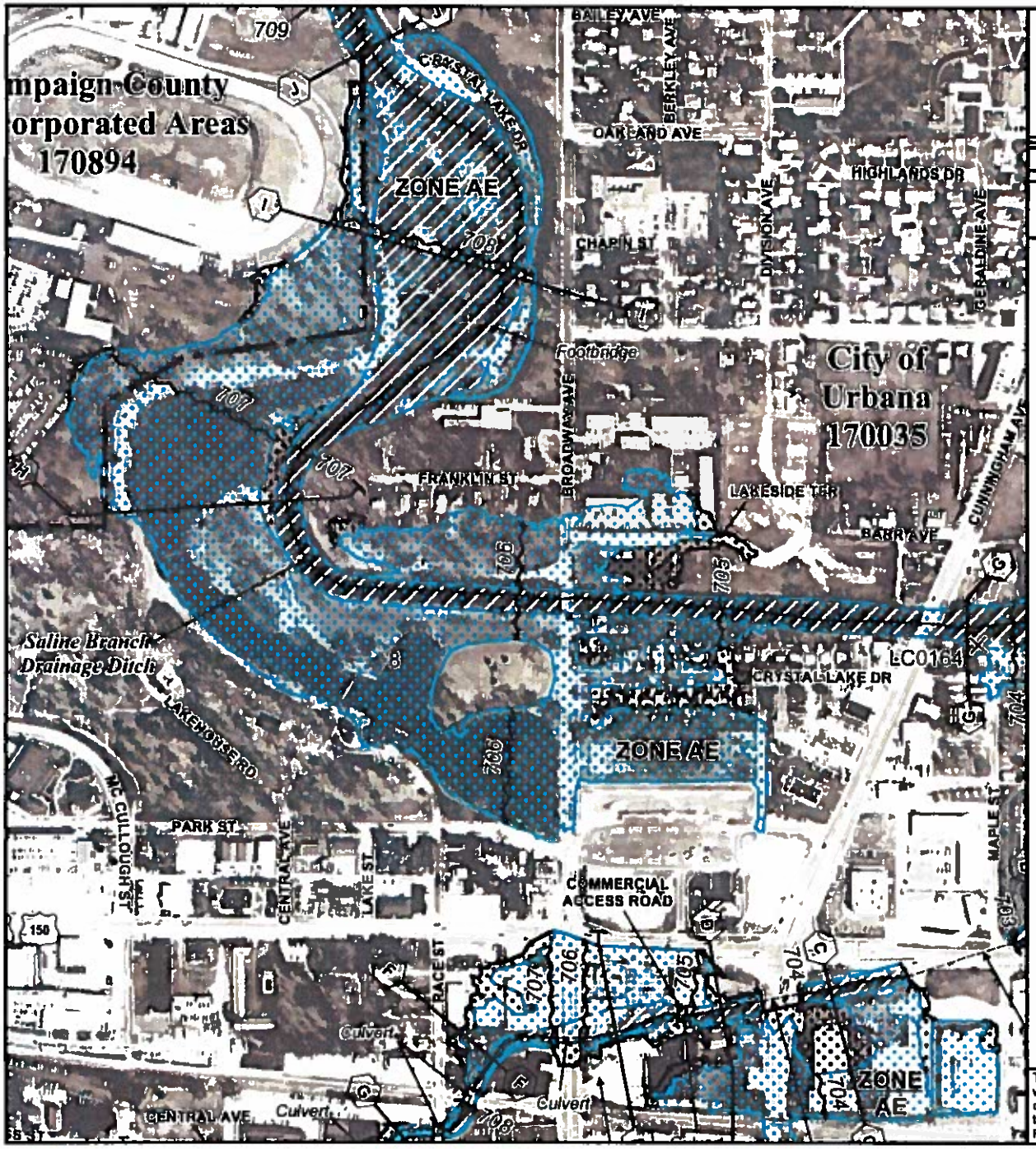
Storm Sewer Calculations

Hydraulic Flow Capacity Based Upon HGL

15 inch diameter storm sewer pipe
n factor = 0.013
S=0.58% (Page 7.03)
Q=5 CFS (Field's Hydraulic Caculator)





MAP SCALE 1" = 500'

0 500 1000 FEET

METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0427D

FIRM

FLOOD INSURANCE RATE MAP

CHAMPAIGN COUNTY, ILLINOIS

AND INCORPORATED AREAS

PANEL 427 OF 625

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
CHAMPAIGN COUNTY	170894	0427	D
URBANA, CITY OF	170035	0427	D

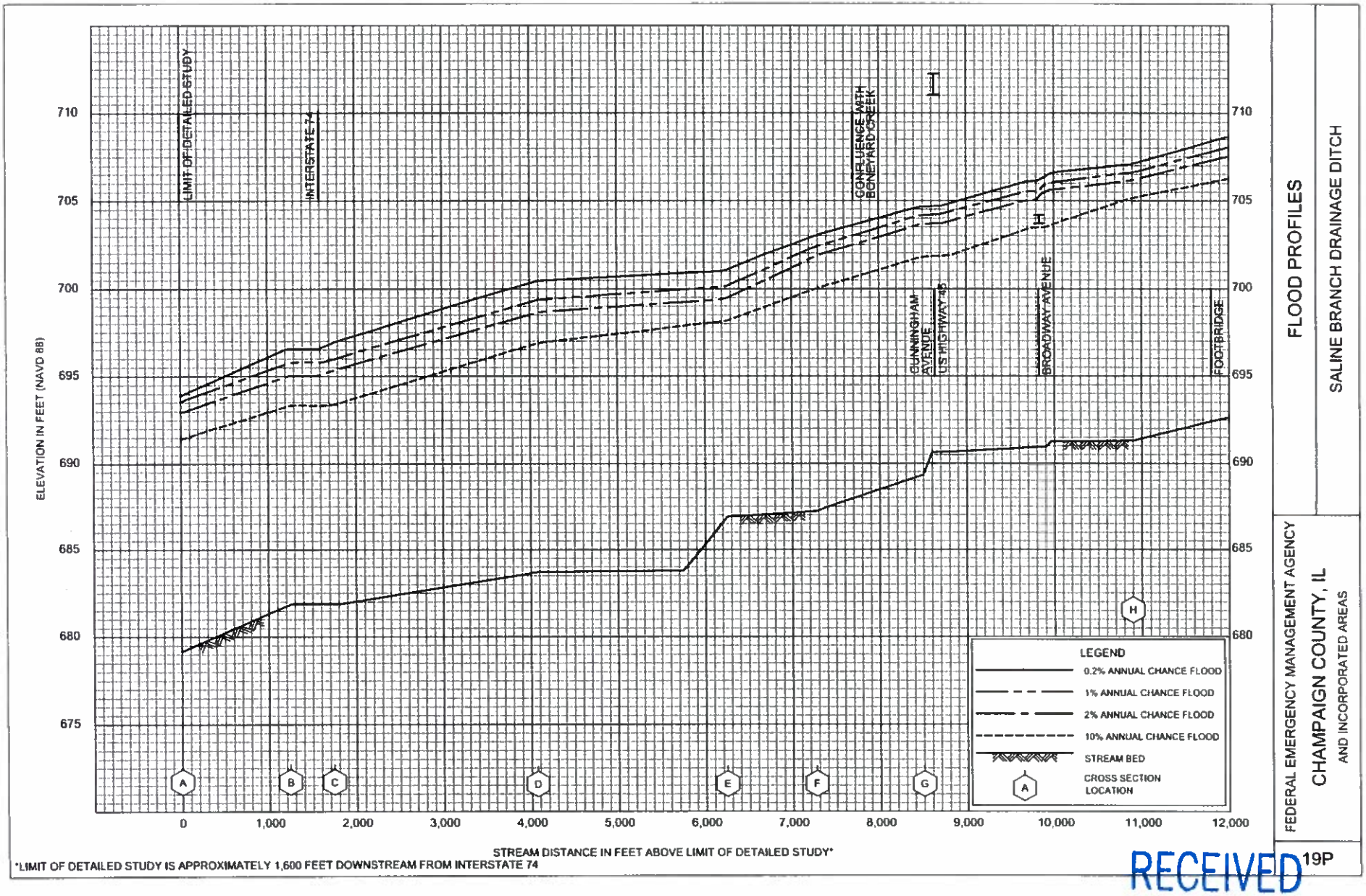
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
17019C0427D

EFFECTIVE DATE
OCTOBER 2, 2013

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



FLOOD PROFILES

SALINE BRANCH DRAINAGE DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

CHAMPAIGN COUNTY, IL

AND INCORPORATED AREAS

19P

KAD LED
LED Area Luminaire

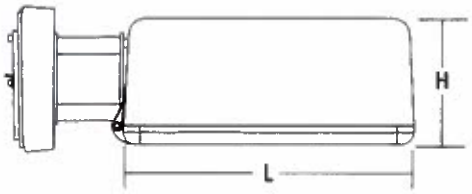
Catalog Number

Notes

Type

Specifications

EPA:	1.2 ft² (0.11 m²)
Length:	17-1/2" (44.5 cm)
Width:	17-1/2" (44.5 cm)
Height:	7-1/8" (18.1 cm)
Weight (max):	36 lbs (16.4 kg)



Introduction

The Contour® Series luminaires offer traditional square dayforms with softened edges for a versatile look that complements many applications. The KAD LED combines the latest in LED technology with the familiar aesthetic of the Contour® Series for stylish, high-performance illumination that lasts. It is ideal for replacing 100- 400W metal halide in area lighting applications with typical energy savings of 70% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: KAD LED 40C 1000 40K R5 MVOLT PUMBAK04 DDBXD

KAD LED

Series	LEDs	Drive current	CCT	Distribution	Voltage	Mounting[1]
KAD LED	20C 20 LEDs 30C 30 LEDs 40C 40 LEDs 60C 60 LEDs	530 530 mA 700 700 mA 1000 1000 mA	30K 3000 K 40K 4000 K 50K 5000 K	R2 Type II R3 Type III R4 Type IV R5 Type V	MVOLT 277[1] 120[1] 347[2] 208[1] 480[2] 240[1]	**Shipped included** SPUMBAK__ Square pole universal mounting adaptor[4] RPUMBAK__ Round pole universal mounting adaptor[4] SPD__ Square pole RPD__ Round pole WBD__ Wall bracket WWD__ Wood pole or wall 04 4" arm 06 6" arm 09 9" arm[3] 12 12" arm[3] **Shipped separately** DAD12P Degree arm (pole) DAD12WB Degree arm (wall)

Options

Shipped installed

- PERS NEMA twist-lock five-wire receptacle only (no controls)[5]
- PER7 Seven-wire receptacle only (no controls)[5]
- SF Single fuse (120, 277, 347V)[1]
- DF Double fuse (208, 240, 480V)[1]
- PIR Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[6]
- PIRH Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[6]
- PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[6]
- PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[6]
- BL30 Bi-level switched dimming, 30%[7,8]
- BL50 Bi-level switched dimming, 50%[7,8]
- PNMTDD3 Part night, dim till dawn[9]
- PNMT5D3 Part night, dim 5 hrs[9]
- PNMT6D3 Part night, dim 6 hrs[9]
- PNMT7D3 Part night, dim 7 hrs[9]
- HS Houseside shield[10]

Shipped separately[10]

- WG Wire guard
- KMA Mast arm external fitter

Finish (required)

- DDBXD Dark bronze
- DBLXD Black
- DNAXD Natural aluminum
- DWHXD White
- DDBTXD Textured dark bronze
- DBLBXD Textured black
- DNATXD Textured natural aluminum
- DWHGXD Textured white

Stock configurations are offered for shorter lead times:

Standard Part Number	Stock Part Number
KAD LED 30C 1000 40K R3 MVOLT PUMBAK09 DDBXD	KADL 30C 40K R3
KAD LED 30C 1000 40K R5 MVOLT PUMBAK09 DDBXD	KADL 30C 40K R5
KAD LED 40C 1000 40K R3 MVOLT PUMBAK09 DDBXD	KADL 40C 40K R3
KAD LED 40C 1000 40K R5 MVOLT PUMBAK09 DDBXD	KADL 40C 40K R5
KAD LED 30C 1000 40K R3 MVOLT PUMBAK09 PIRH DDBXD	KADL 30C 40K R3 PIRH
KAD LED 30C 1000 40K R5 MVOLT PUMBAK09 PIRH DDBXD	KADL 30C 40K R5 PIRH
KAD LED 40C 1000 40K R3 MVOLT PUMBAK09 PIRH DDBXD	KADL 40C 40K R3 PIRH
KAD LED 40C 1000 40K R5 MVOLT PUMBAK09 PIRH DDBXD	KADL 40C 40K R5 PIRH

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V)[11]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V)[11]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V)[11]
SC U	Shorting cap[11]
KADLEDHS 20C U	Houseside shield for 20 LED unit
KADLEDHS 30C U	Houseside shield for 30 LED unit
KADLEDHS 40C U	Houseside shield for 40 LED unit
KADLEDHS 60C U	Houseside shield for 60 LED unit
KMA DDBXD U	Mast arm adapter (specify finish)
KADWG U	Wire guard accessory
PUMBAK DDBXD U*	Square and round pole universal mounting bracket adaptor (specify finish)

For more control options, visit DTL and ROAM online
**Round pole top must be 3.25" O.D. minimum.*

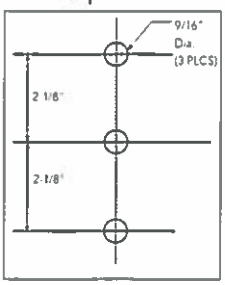
NOTES

1. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
2. Maximum ambient temperature with 347V or 480V is 30°C.
3. 9" or 12" arm is required when two or more luminaires are oriented on a 90° drilling pattern.
4. Available as a separate combination accessory: PUMBAK (finish) U.
5. Mounting must be restricted to ±45° from horizontal aim per ANSI C136.10-2010.
6. PIR and PIR1FC3V specify the SensorSwitch SBGR 1e ODP control; PIRH and PIRH1FC3V specify the SensorSwitch SBGR 6 ODP control; see Motion Sensor Guide for details. Dimming driver standard.
7. Requires an additional switched circuit with same phase as main luminaire power. Supply circuit and control circuit are required to be in the same phase.
8. Dimming driver standard. MVOLT only. Not available with 347V, 480V, PER5, PER7 or PNMT options.
9. Dimming driver standard. MVOLT only. Not available with 347V, 480V, PER5, PER7, BL30 or BL50.
10. Also available as a separate accessory; see Accessories information.
11. Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item from Acuity Brands Controls.

Drilling

Template #5

Top of Pole



Tenon Mounting Slipfitter**

Tenon O.D.	Single Unit	2 at 180°	2 at 90° †	3 at 120°	3 at 90° †	4 at 90° †
2-3/8"	T20-190	T20-280	T20-290	T20-320 †	T20-390	T20-490
2-7/8"	T25-190	T25-280	T25-290	T25-320	T25-390	T25-490
4"	T35-190	T35-280	T35-290	T35-320	T35-390	T35-490

** For round pole mounting (RPDXX) only. † Requires 9" or 12" arm.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
20C	530 mA	35W	R2	4,140	1	0	1	118	4,446	1	0	1	127	4,473	1	0	1	128
			R3	4,123	1	0	1	118	4,427	1	0	1	126	4,455	1	0	1	127
			R4	4,128	1	0	1	118	4,433	1	0	1	127	4,460	1	0	1	127
			R5	4,381	2	0	1	125	4,704	3	0	1	134	4,734	3	0	1	135
	700 mA	45W	R2	5,271	1	0	1	117	5,660	1	0	1	126	5,696	1	0	2	127
			R3	5,250	1	0	2	117	5,637	1	0	2	125	5,672	1	0	2	126
			R4	5,256	1	0	2	117	5,644	1	0	2	125	5,679	1	0	2	126
			R5	5,578	3	0	1	124	5,990	3	0	1	133	6,027	3	0	1	134
	1000 mA	73W	R2	7,344	1	0	2	101	7,886	2	0	2	108	7,935	2	0	2	109
			R3	7,314	1	0	2	100	7,854	1	0	2	108	7,903	1	0	2	108
			R4	7,322	1	0	2	100	7,863	1	0	2	108	7,912	1	0	2	108
			R5	7,771	3	0	1	106	8,345	3	0	1	114	8,397	3	0	1	115
30C	530 mA	53W	R2	6,166	1	0	2	116	6,621	1	0	2	125	6,663	1	0	2	126
			R3	6,141	1	0	2	116	6,594	1	0	2	124	6,635	1	0	2	125
			R4	6,148	1	0	2	116	6,602	1	0	2	125	6,643	1	0	2	125
			R5	6,525	3	0	1	123	7,006	3	0	1	132	7,050	3	0	1	133
	700 mA	69W	R2	7,817	2	0	2	113	8,395	2	0	2	122	8,447	2	0	2	122
			R3	7,785	1	0	2	113	8,360	2	0	2	121	8,412	2	0	2	122
			R4	7,794	1	0	2	113	8,370	1	0	2	121	8,422	1	0	2	122
			R5	8,272	3	0	2	120	8,883	3	0	2	129	8,938	3	0	2	130
	1000 mA	108W	R2	10,755	2	0	2	100	11,549	2	0	2	107	11,621	2	0	2	108
			R3	10,711	2	0	2	99	11,502	2	0	2	106	11,574	2	0	2	107
			R4	10,724	2	0	2	99	11,515	2	0	2	107	11,587	2	0	2	107
			R5	11,381	3	0	2	105	12,221	4	0	2	113	12,297	4	0	2	114
40C	530 mA	71W	R2	8,156	2	0	2	115	8,758	2	0	2	123	8,812	2	0	2	124
			R3	8,122	2	0	2	114	8,722	2	0	2	123	8,776	2	0	2	124
			R4	8,132	1	0	2	115	8,732	1	0	2	123	8,786	1	0	2	124
			R5	8,630	3	0	2	122	9,267	3	0	2	131	9,325	3	0	2	131
	700 mA	94W	R2	10,286	2	0	2	109	11,045	2	0	2	118	11,114	2	0	2	118
			R3	10,244	2	0	2	109	11,000	2	0	2	117	11,069	2	0	2	118
			R4	10,256	2	0	2	109	11,013	2	0	2	117	11,081	2	0	2	118
			R5	10,884	3	0	2	116	11,688	4	0	2	124	11,761	4	0	2	125
	1000 mA	141W	R2	13,923	2	0	2	99	14,951	2	0	2	106	15,045	2	0	2	107
			R3	13,866	2	0	3	98	14,890	2	0	3	106	14,983	2	0	3	106
			R4	13,882	2	0	3	98	14,907	2	0	3	106	15,000	2	0	3	106
			R5	14,733	4	0	2	104	15,821	4	0	2	112	15,920	4	0	2	113
60C	530 mA	103W	R2	11,996	2	0	2	116	12,882	2	0	2	125	12,963	2	0	2	126
			R3	11,947	2	0	2	116	12,829	2	0	2	125	12,909	2	0	2	125
			R4	11,961	2	0	2	116	12,844	2	0	2	125	12,925	2	0	2	125
			R5	12,694	4	0	2	123	13,632	4	0	2	132	13,717	4	0	2	133
	700 mA	137W	R2	14,927	2	0	2	109	16,029	3	0	3	117	16,130	3	0	3	118
			R3	14,866	2	0	3	109	15,964	2	0	3	117	16,063	2	0	3	117
			R4	14,884	2	0	3	109	15,982	2	0	3	117	16,082	2	0	3	117
			R5	15,796	4	0	2	115	16,962	4	0	2	124	17,068	4	0	2	125
	1000 mA	216W	R2	19,328	3	0	3	89	20,754	3	0	3	96	20,884	3	0	3	97
			R3	19,248	3	0	3	89	20,669	3	0	4	96	20,799	3	0	4	96
			R4	19,271	3	0	3	89	20,693	3	0	4	96	20,823	3	0	4	96
			R5	20,452	4	0	2	95	21,962	4	0	2	102	22,099	4	0	2	102

Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.99

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **KAD LED** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM 21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	KAD LED 60C 1000			
	1.0	0.91	0.86	0.76
	KAD LED 40C 1000			
	1.0	0.93	0.88	0.79
	KAD LED 60C 700			
	1.0	0.98	0.97	0.94

Electrical Load

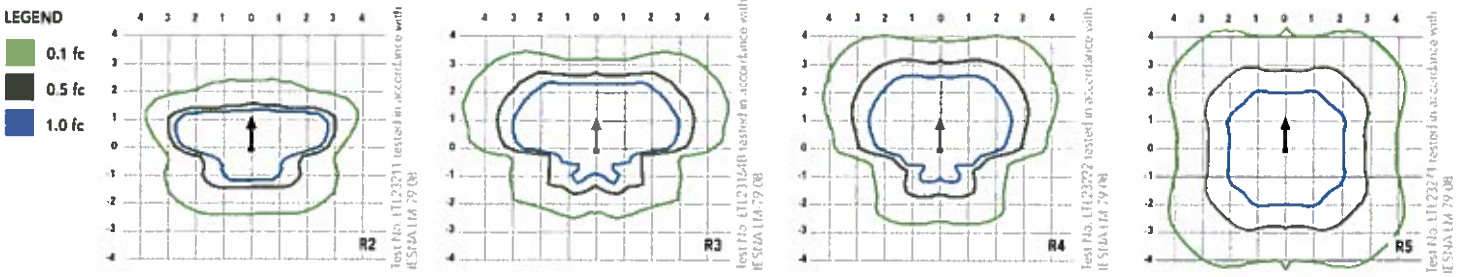
Number of LEDs	Drive Current (mA)	System Watts	Current (A) 120	208	240	277	347	480
20	530	35	0.30	0.18	0.16	0.15	-	-
	700	45	0.39	0.23	0.20	0.18	0.15	0.12
	1000	73	0.61	0.35	0.31	0.27	0.22	0.17
30	530	53	0.44	0.26	0.23	0.20	-	-
	700	69	0.58	0.34	0.29	0.26	0.21	0.16
	1000	108	0.90	0.52	0.46	0.40	0.32	0.24
40	530	71	0.60	0.35	0.32	0.29	0.21	0.16
	700	94	0.79	0.46	0.41	0.36	0.27	0.20
	1000	141	1.18	0.68	0.59	0.52	0.42	0.30
60	530	103	0.87	0.50	0.44	0.39	0.29	0.22
	700	137	1.15	0.66	0.58	0.51	0.40	0.29
	1000	216	1.81	1.04	0.92	0.81	0.63	0.47

NOTE: All ratings in this table are for a nominal system operated at 25°C ambient temperature. Current and power specifications in this table do not include branch circuit derating specified in the National Electrical Code. Please observe all applicable electrical codes and ratings.

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's KAD LED homepage.

Isofootcandle plots for the KAD LED 60C 1000 40K. Distances are in units of mounting height (20').



FEATURES & SPECIFICATIONS

INTENDED USE
The energy savings and long life of the KAD LED area luminaire make it a reliable choice for illuminating streets, walkways, parking lots, and surrounding areas.

CONSTRUCTION
Single-piece die-cast, aluminum housing with contoured edges has a 0.12" nominal wall thickness. Die-cast door frame has an impact-resistant, tempered glass lens that is fully gasketed with one piece tubular silicone.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS
Precision-molded refractive acrylic lenses are available in four distributions. Light engines are available in standard 4000K, 3000K or 5000K (70 CRI) configurations.

ELECTRICAL
Light engine consists of high-efficacy LEDs mounted to a metal-core circuit board and aluminum heat sink, ensuring optimal thermal management and long life. Class 1 electronic driver has a power factor >90%, THD <20%, and has an expected life of 100,000 hours with <1% failure rate. Easily-serviceable surge protection device meets a minimum Category C Low (per ANSI/IEEE C62.41.2).

INSTALLATION
Included universal mounting block and extruded aluminum arm facilitate quick and easy installation using nearly any existing drilling pattern. Stainless steel bolts fasten the luminaire to the mounting block securing it to poles or walls. The KAD LED can withstand up to a 1.5 G vibration load rating per ANSI C136.31. The KAD LED also utilizes the standard K-Series (Template #5) for pole drilling.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY
5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25°C. Specifications subject to change without notice.

BERNS, CLANCY AND ASSOCIATES, P.C.
ENGINEERS • SURVEYORS • PLANNERS
☒ URBANA, IL 61803-0755 • TEL 217/384-1144 • FAX 217/384-3355
☐ DANVILLE, IL 61832-5729 • TEL 217/431-1144 • FAX 217/431-2929

Job # 2612-56
Computer CB
Date 5-26-16

Project: Fairgrounds Parking Lot Special Use Permit

Sheet 1 of 1

John Hall, Zoning Administrater
Ch-Co. Department of Planning and Zoning
Brookins Administrative Center
1776 E. Washington Street
Urbana, IL 61802

RECEIVED
MAY 31 2016
CHAMPAIGN CO. P & Z DEPARTMENT

Dear John,

One item of information you requested in your email of April 27 to Mike Kobel was regarding the bus routes and schedules that Carle runs through the parking lot. We enclose an 8½x11 and 11x17 color copy of two exhibits provided by Carle as follows:

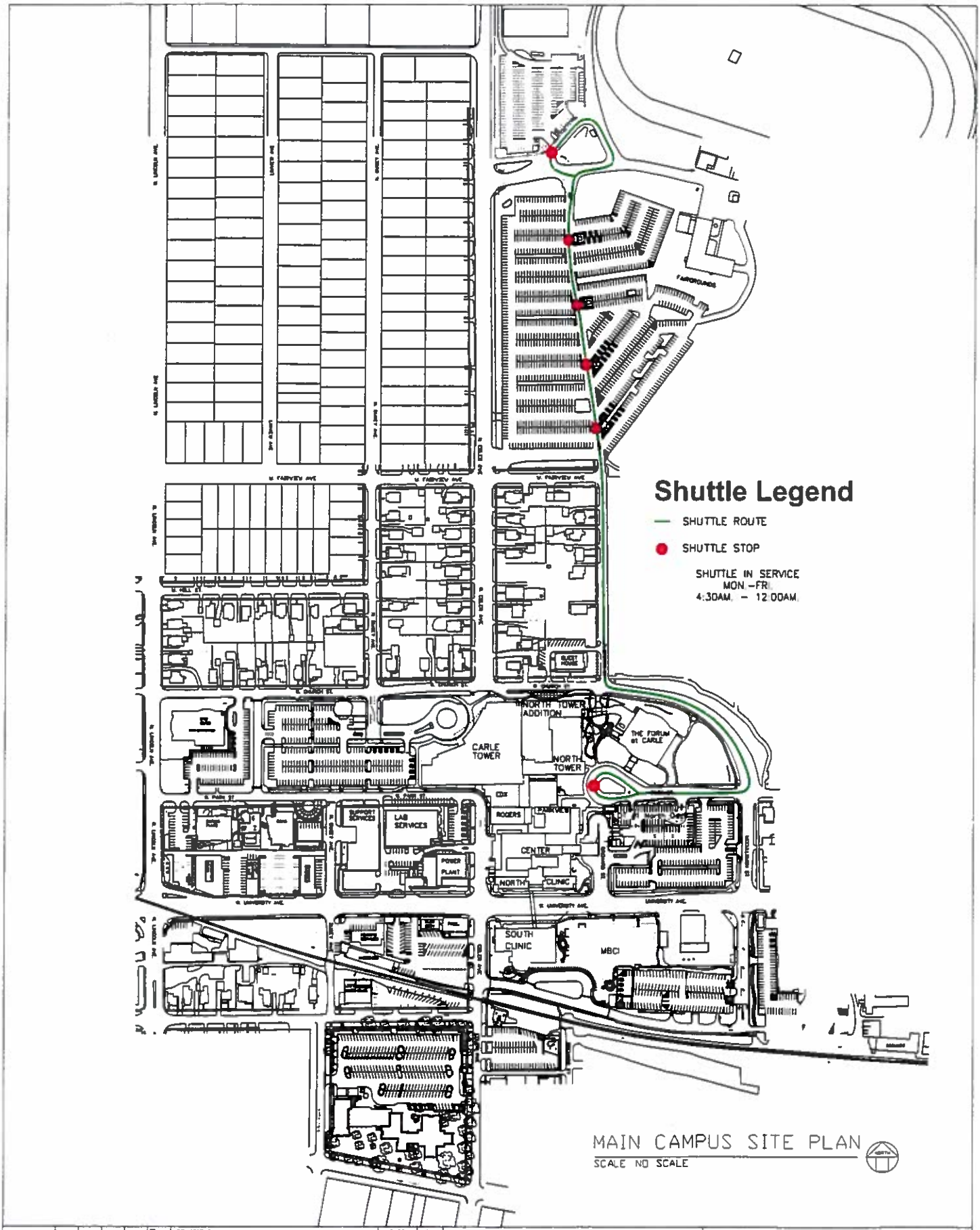
The "Green" shuttle route runs through the Fairgrounds parking lot and to the North Tower at Park Street. We have recently learned that the hours of operation are somewhat extended – from 4:30 am to 12:30 am. This shuttle runs on roughly a 9 minute schedule.

The "Blue" shuttle route runs through the Fairgrounds parking lot and other areas of the campus. This operates from 6 am to 7 pm, Monday thru Friday. The interval of this shuttle is just a bit longer than the other.

The focus of these shuttle routes is to more efficiently serve employees and patrons using the more remote parking areas in order to minimize impacts on adjacent neighborhoods. Hopefully this information is helpful.

Chris Billing

cc: Mike Millage / Mike Kobel



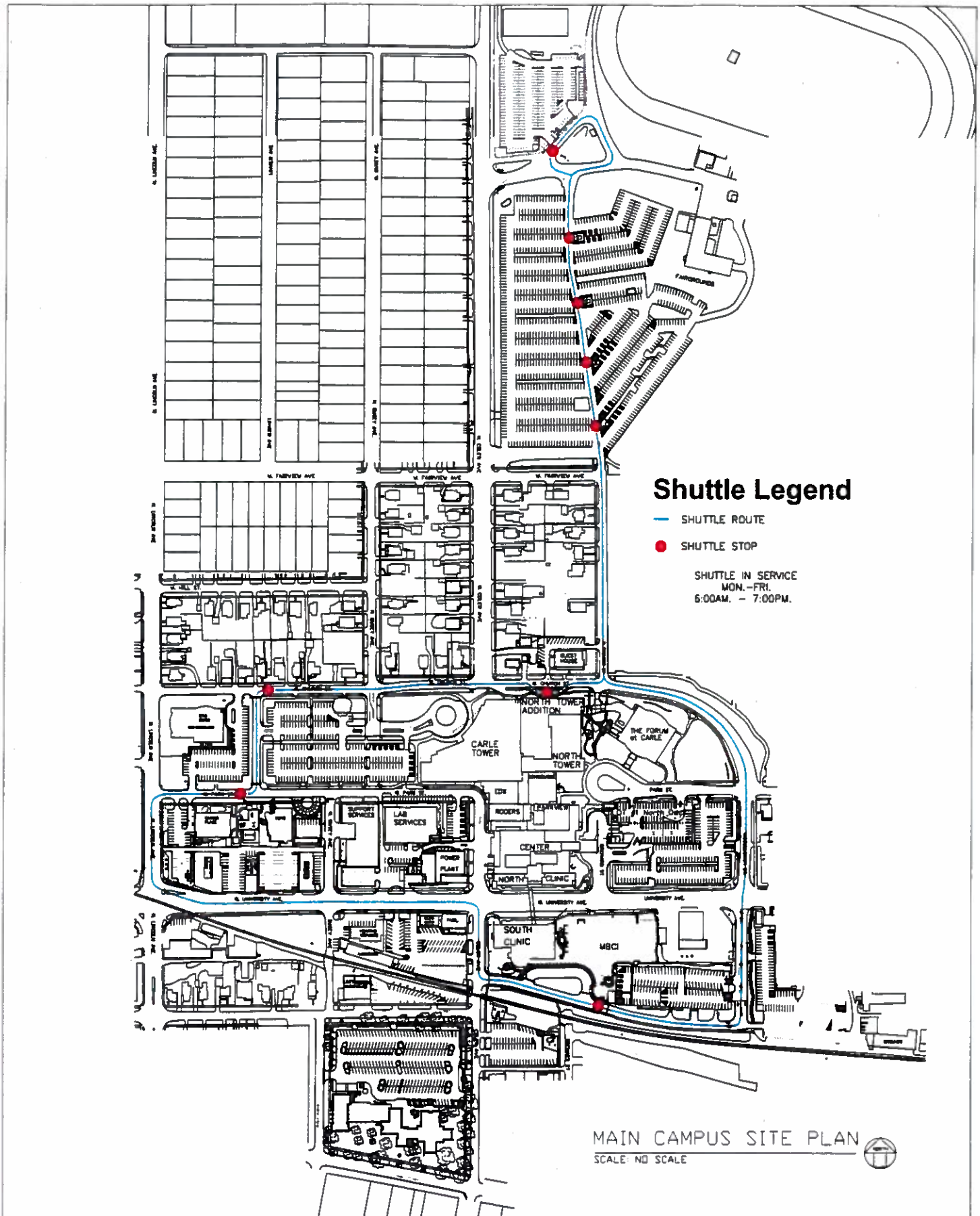
MAIN CAMPUS SITE PLAN

SCALE NO SCALE

SHEET	MCSP 01	REVISIONS	DATE / BY
DRAWING			
DRAWN BY			
CHECKED BY			
SCALE	No Scale		
DATE	MAY 09, 2016		
JOB NO.			

CARLE HOSPITAL
SHUTTLE ROUTE PLAN

Carle
Carle Foundation Hospital
Construction and Facilities Planning
611 West Park Street, Urbana, IL 61801 Phone: (217) 383-4403



MCSP 01				No Scale	MAY 09, 2016	REVISIONS	DATE	BY

CARLE HOSPITAL
SHUTTLE ROUTE PLAN

Carle
Carle Foundation Hospital
Construction and Facilities Planning
611 West Park Street, Urbana, IL 61801 Phone (217) 383-4463

Urbana Park District

Darius E Phebus Administrative Building / 303 W University Ave / Urbana, IL 61801
Phone 217.367.1536 / Fax 217.367.1391 / www.urbanaparks.org

January 12, 2016

Mr. John Hall
Champaign County Zoning Administrator
Brookens Administrative Center
1776 E. Washington Street
Urbana, IL 61802

Dear Mr. Hall,

I am writing on behalf of the Urbana Park District in support of the Champaign County Fair Association's request to expand their parking infrastructure on the Fairgrounds property located adjacent to Crystal Lake Park, Urbana, IL. In addition, the Urbana Park District supports the use and leasing of the parking lots to Carle Hospital to help support their parking needs for many of the Carle employees.

The Urbana Park District supports the parking expansion due to our District's on-going use of the parking lots for larger special events hosted at Crystal Lake Park and/or on the Fairground property. Examples of past use include the UPD's 100th Anniversary celebration that included the week-long "Chautauqua" event, co-sponsorship of the Crazy K Race held in Crystal Lake Park and the Fairground site and various events held to support our Champaign-Urbana Special Recreation events supported by both the Champaign and Urbana Park Districts to name a few.

The UPD benefits from the joint use of the existing parking, which helps reduce the parking needs for larger, community-wide events in Crystal Lake Park. This helps us better control storm water runoff, reduce traffic circulation in the park, is more user-friendly for visitors to our area that come to support the various events and confines the parking aspect of an event to one main location. We also know this aids our local traffic enforcement in managing public safety regarding large volumes of traffic.

Please let me know if you need any additional information from the Urbana Park District regarding the request to expand parking at the Champaign County Fairgrounds.

Sincerely,

Timothy A. Bartlett

Timothy A. Bartlett

cc: Michael Kobel
Scott Harding

836-S-16 Images

Proposed parking area from south end facing north

Proposed parking area from SE inside fairgrounds facing NW

836-S-16 Images

Proposed parking area (inside fence) along Coler Avenue facing north

Proposed shed to be removed for parking area, from west end facing east

836-S-16 Images

Existing Shuttle Stop 2

Existing Shuttle Stop 2 and Carle shuttle

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PRELIMINARY DRAFT

836-S-16

SUMMARY OF EVIDENCE, FINDING OF FACT AND FINAL DETERMINATION of Champaign County Zoning Board of Appeals

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Final Determination:	***{GRANTED/GRANTED WITH SPECIAL CONDITIONS/DENIED}***
Date:	***{June 30, 2016}***
Petitioners:	Michael Kobel, President, Champaign County Fair Association
Request:	Authorize a Special Use Permit in the CR Conservation Recreation Zoning District for the following: Part A: Authorize the expansion of a Fairgrounds that was previously authorized as a Special Use Permit in Case 962-S-94; and Part B: Authorize the use of an existing Parking Lot as an additional principal use and the use of existing parking related pick up stations as additional principal structures on a Fairgrounds; and Part C: Authorize the construction and use of a proposed Parking Lot as an additional principal use and a proposed related passenger waiting building as an additional principal structure on a Fairgrounds.

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SUMMARY OF EVIDENCE

From the documents of record and the testimony and exhibits received at the public hearing conducted on **June 30, 2016,** the Zoning Board of Appeals of Champaign County finds that:

1. The petitioner, Michael Kobel, is the President of the Champaign County Fair Association, which owns the subject property. The 2016 Board of Directors for the Champaign County Fair Association includes: Kent Weeks, 1st Vice President, 3310 N Mattis Ave, Champaign IL 61822; Edgar Busboom, 2nd Vice President, 2106 CR 2500 N, Thomasboro IL 61878; John Bell,Secretary,1614 W Park Ave, Champaign IL 61821; Pam Barham, Treasurer, 2451 Clayton Blvd, Champaign IL 61822; HD Brown, Director, 907 N Country Fair Dr, Champaign IL 61821; Dave Price, Director,1807 S Brook Ct, Mahomet IL 61853; Bob Williams, Director, 409 S Bourne, Tolono IL 61880; Bill Alagna, Director, P.O. Box 70, Seymour IL 61875; Jared Little, Director,1321 Cobble Stone Way, Champaign IL 61822; Debbie Weeks, Director, 700 Schluter St, Thomasboro IL 61878; and Larry Buhrmester, Director, 41 Lange, Savoy, IL 61874.

2. The subject property is a 53.79 acre tract in the Northwest Quarter of Section 8, Township 19 North, Range 9 East of the Third Principal Meridian in Urbana Township and commonly known as the Champaign County Fairgrounds with an address of 1302 North Coler Avenue, Urbana.

3. Regarding municipal extraterritorial jurisdiction and township planning jurisdiction:
   A. The subject property is located within the one and one-half mile extraterritorial jurisdiction of the City of Urbana, a municipality with zoning. Municipalities with Planning Commissions are notified of Special Use Permit cases, but do not have protest rights in these cases.

   B. The subject property is located within Urbana Township, which does not have a Planning Commission.

GENERALLY REGARDING LAND USE AND ZONING IN THE IMMEDIATE VICINITY

4. Land use and zoning on the subject property and in the vicinity are as follows:
   A. The subject property is a 53.79 acre tract and is currently zoned CR Conservation Recreation. Land use is a public fairgrounds and parking lot approved in Case 962-S-94.

   B. With the exception of the land northwest of the subject property, all surrounding areas are within the City of Urbana and have City of Urbana zoning.
      (1) Land to the northwest is zoned R-4 Multiple Family Residence and is in use as Vineyard Christian Church.

   C. Land to the north of the subject property is zoned City of Urbana CRE Conservation-Recreation-Education and is in use as the Urbana Park District's Busey Woods.

   D. Land to the south of the subject property is zoned City of Urbana CRE Conservation-Recreation-Education toward the east and R-2 Single Family Residential toward the west and is in use as a mix of residential and Urbana Park District properties.

E. Land to the east of the subject property is zoned City of Urbana CRE Conservation-Recreation-Education and is in use as the Urbana Park District's Crystal Lake Park.

F. Land to the west of the subject property is zoned City of Urbana R-2 Single Family Residential and is in use as residential.

GENERALLY REGARDING THE PROPOSED SPECIAL USE

5. Regarding the Site Plan and proposed activities for the proposed Special Use:
   A. Existing structures include (as numbered on the Site Plan received May 9, 2016):
      (1) Fair Office (south of the track);

      (2) Main restrooms (east of existing parking lot) - SUP 962-S-94, ZUPA #139-95-04;

      (3) Kesler Exhibit Hall (just east of main restrooms);

      (4) Grandstands (south of track);

      (5) Fish tent – vendors (east end of grandstands);

      (6) Pavilion – beer tent (east of grandstands) – ZUPA #312-89-01;

      (7) Corral/paddock area (north of track);

      (8) Steel water tank (east of corral/paddock area);

      (9) Horse barn for boarding, 1 of 2 (north of track);

      (10) Horse barn for boarding, 2 of 2 (north of track);

      (11) Horse barn (north of track);

      (12) Speed office – Fair only (north of track between horse barns);

      (13) Portable stage (middle of track);

      (14) Portable announcer's stand (middle of track);

      (15) 4-H restrooms (west of track);

      (16) Sheep barn (northwest corner of property);

      (17) Hog barn, 1 of 2 (northwest corner of property);

      (18) Hog barn, 2 of 2 (northwest corner of property);

      (19) Beef barn (west of track) – ZUPA #68-77-02 and #226-84-03;

(20) Dairy barn (west of track) – ZUPA #68-77-02 and #226-84-03;

(21) Manure pits (south of dairy barn);

(22) Cattle wash racks (south of dairy barn);

(23) Maintenance facility and office (where new parking is proposed; shed will be demolished) – ZUP #121-79-03

(24) ½ mile dirt track (outer ring);

(25) ¼ mile dirt track (inner ring);

(26) Electric courtyard (south of grandstands);

(27) Midway – carnival (southeast of grandstands);

(28) Kiddy-land area (north of existing parking lot);

(29) Food vendors (north of existing parking lot);

(30) Carle shuttle stops – 3 (inside existing parking lot);

(31) Main fair entrance (southwest corner of property and west side of property);

(32) Secondary access gates (on west property line: north of proposed parking area, north of beef barn; on east property line: south of proposed new shed); and

(33) Existing parking lot (southwest corner, not numbered) – ZUP #021-88-01, 285-93-02, and 111-94-01.

B. Proposed improvements include:

(1) A new parking area on the west side of the subject property;

(2) A new shuttle pick up station in the new parking area;

(3) A "New Building" in the northeast corner of the property adjacent to #32 Secondary Access Gates", which is considered a non-significant expansion of the existing Special Use approved under Case 962-S-94; and

(4) A new 0.3 acre stormwater detention basin and associated berm on the south end of the property, which is part of the Stormwater Management Plan prepared by Berns, Clancy and Associates received May 26, 2016 (see map in the Stormwater Management Plan for location, and page 13 of the Site Plan for more detail).

a. The proposed parking lot area and all areas draining to and through the proposed site improvements for stormwater management consideration are

referred to as "Drainage Area B" (see map in the Stormwater Management Plan for Drainage Area locations).

(a) Drainage Area B currently flows on the surface generally southeasterly toward the Fairground's west entrance driveway pavement and over the driveway pavement towards Project Inlet 07.

(b) A 10 inch diameter storm sewer drains Project Inlet 07 westerly, presumably to a blind connection to an existing 24 inch diameter City of Urbana storm sewer which drains southeasterly and connects to a City of Urbana 54 inch diameter storm sewer at Project Inlet 08.

(c) A 54 inch diameter storm sewer extends southeasterly between Project Inlet 08 and Project Inlet 12. This 54 inch diameter storm sewer then continues through Crystal Lake Park, and then discharges into the Crystal Lake Sediment Basin located at the northeasterly end of Crystal Lake.

(d) Rainfall runoff in excess of the capacity of Project Inlet 08 flows southeasterly over the surface of the existing fairgrounds parking lot towards Project Inlet 12 and Project Inlet 13. Any excess of the capacity of those two inlets flows over land southeasterly toward Crystal Lake.

(e) A small berm has been constructed within the Fairgrounds property immediately adjacent to the Fairgrounds tile line in order to create an informal stormwater management basin. This informal basin outlets through Project Outlet 11 into a 15 inch diameter storm sewer that outlets directly into Crystal Lake. Once the informal basin is "full", the berm is overtopped and rainfall runoff flows over land towards Crystal Lake.

b. The rainfall runoff calculations on page 2.02 indicate that the post-construction peak rate of stormwater runoff from Drainage Area B will increase for all storm events as follows:

(a) peak runoff from the 2-year storm event will increase from current condition 2.2 cubic feet per second (CFS) to 5.0 CFS post-construction;

(b) peak runoff from the 5-year storm event will increase from 2.7 cubic feet per second (CFS) to 6.2 CFS;

(c) peak runoff from the 10-year storm event will increase from 3.1 cubic feet per second (CFS) to 7.1 CFS;

(d) peak runoff from the 25-year storm event will increase from 4.1 cubic feet per second (CFS) to 9.4 CFS;

(e) peak runoff from the 50-year storm event will increase from 5.2 cubic feet per second (CFS) to 11.9 CFS;

(f) peak runoff from the 100-year storm event will increase from 6.2 cubic feet per second (CFS) to 14.2 CFS.

c. The Stormwater Management Plan proposes a new stormwater detention basin at the northerly end of Drainage Area E that will capture stormwater runoff from Drainage Areas B, D, and E.

d. The rainfall runoff calculations summary on page 2.09 indicates that by integrating the proposed stormwater drainage basin in Drainage Area E to receive stormwater from Drainage Areas B, D and E, total outflow from Drainage Areas B, D, and E will decrease as per the following:
   (a) total outflow from Drainage Areas B, D and E from the 2-year storm event will decrease from current condition 14.7 cubic feet per second (CFS) to 9.5 CFS post-construction;
   (b) total outflow from Drainage Areas B, D and E from the 5-year storm event will decrease from 18.1 CFS to 10.9 CFS;
   (c) total outflow from Drainage Areas B, D and E from the 10-year storm event will decrease from 20.7 CFS to 12.0 CFS;
   (d) total outflow from Drainage Areas B, D and E from the 25-year storm event will decrease from 27.3 CFS to 14.7 CFS;
   (e) total outflow from Drainage Areas B, D and E from the 50-year storm event will decrease from 34.8 CFS to 17.5 CFS;
   (f) total outflow from Drainage Areas B, D and E from the 100-year storm event will decrease from 41.8 CFS to 21.0 CFS.

e. Page 4.03 of the Storm Water Management Plan shows detention basin volume calculations for the proposed off-site detention basin. The off-site basin will be located in Drainage Area E on the south end of the subject property, to the east of existing parking.
   (a) The existing flood plain volume is 14,517 cubic feet.

   (b) The minimum required capacity for the proposed off-site detention basin is 31,981 cubic feet.

   (c) The proposed storage capacity of the stormwater detention basin at a surface elevation of 707.5 feet is 37,080 cubic feet.

f. Excess from the proposed stormwater detention basin will back up into the existing parking lot at an elevation of 707.65 feet and then flow along the existing curb northeasterly to Project Inlet 10 and the grass area easterly of Project Inlet 10 and then to the existing 54 inch diameter storm sewer at Project Inlet 12. Excess rainfall runoff that cannot be accommodated by the existing inlets and storm sewers will continue to flow over land towards Crystal Lake.

C. The following Zoning Use Permits were issued on the subject property;
   (1) ZUPA #068-77-02 was approved on March 17, 1977 for construction of a detached cattle barn.

(2) ZUPA #121-79-03 was approved on May 1, 1979 for construction of a detached cattle barn/storage building.

(3) ZUPA #153-84-02 was approved on June 3, 1984 for a lighted sign on the Fairgrounds entrance gate.

(4) ZUPA #226-84-03 was approved on August 20, 1984 for the demolition of a cattle barn.

(5) ZUPA #021-88-01 was approved on January 21, 1988 for the first phase of parking lot conversion from grass area to paved area.

(6) ZUPA #312-89-01 was approved on November 8, 1989 for construction of a pavilion.

(7) ZUPA #285-93-02 was approved on October 21, 1993 to convert a grass parking area to a paved parking lot.

(8) ZUPA #111-94-01 was approved on May 5, 1994 for continuation of the parking lot conversion.
   a. The 4 existing shuttle pick up stations were shown on the approved site plan for this Zoning Use Permit. They were thus approved, but should not have been because they should have been considered significant expansions to the Fairgrounds.

(9) ZUPA #139-95-04 was approved on May 19, 1995 in conjunction with Special Use case 962-S-94 for construction of the restroom facility.

(10) ZUPA #306-15-01 was approved on November 18, 2015 for construction of a pavilion (gazebo, which was considered an insignificant expansion of SUP 962-S-94). This gazebo is under construction to the east of the existing pavilion.

D. Previous zoning cases for the subject property include:

(1) Text Amendment 954-AT-95 was adopted on January 17, 1995 and allowed for Public Fairgrounds to be permitted by Special Use Permit in the CR Zoning District. No standard conditions affecting Section 6 of the Zoning Ordinance were adopted in conjunction with that case.

(2) Special Use 962-S-94 was approved on March 2, 1995 to allow the continued use and expansion of a non-conforming Fairgrounds in the CR Conservation Recreation Zoning District.
   a. Approved Finding of Fact for this case included information such as:
      (a) The Champaign County Soil and Water Conservation District declined the request for a Natural Resource Report for this case.

(b) The Fairgrounds have been in operation at the subject site since prior to the adoption of County Zoning in 1973, and therefore have retained non-conforming rights.

(c) This Special Use Permit case is the result of the petitioner's desire to construct a new 2,052 square foot restroom facility. Any further expansions deemed significant expansions of a previously issued Special Use Permit will require additional Special Use Permits.

(d) The fairgrounds have been allowed a limited number of Zoning Use Permits without being required to file a Special Use Permit. These previously approved construction activities were not deemed significant expansions or improvements contributing to the longevity of a non-conforming use.

b. All grass areas converted to paved parking areas occurred between 1988 and prior to approval of Special Use 962-S-94 on March 2, 1995, and were considered to be insignificant expansions of the Fairgrounds (see Attachment: Parking Expansions Map).
   (a) Storm water detention is not automatically required for the existing pavement because those expansions predated Special Use 962-S-94.

(3) Text Amendment 819-AT-15 was adopted on March 17, 2016 and amended the Zoning Ordinance with the following:
   a. Section 6.1.3 now includes a standard condition for the Fairground Special Use: “Site design, land management, and storm water management designs and practices shall provide effective site drainage; shall meet or exceed state and federal water quality standards; shall protect downstream drainage patterns; shall provide for stream flows that support healthy aquatic ecosystems; shall minimize impacts on adjacent properties and cause no more than minimal disturbance to the stream corridor environment; and, shall wherever possible, preserve existing habitat, enhance degraded habitat, and restore habitat.

   b. Section 6.1.3 added a new Special Use category: “Parking lot and related passenger waiting buildings as an additional principal use or additional principal structure.

   c. Subparagraph 4.2.1 C.4. now states, “PARKlNG LOT and related passenger waiting buildings may be authorized in the CR District only as an additional principal USE or additional principal STRUCTURE on Public Fairgrounds by SPECIAL USE Permit subject to Section 5.2.”

   d. Section 5.2. now has “PARKING GARAGE or LOT” as a Principal Use, with a footnote that states: “PARKING LOT and related passenger waiting buildings may be authorized in the CR District only as an additional principal USE or additional principal STRUCTURE on Public Fairgrounds

by SPECIAL USE Permit subject to the standard conditions in Section 6.1.3. provided that the Public Fairgrounds were an established use at the subject location on October 10, 1973, and provided that a Public Fair must continue to be held at the Public Fairgrounds or the Special Use Permit shall become void and subject to the standard conditions in Section 6.1.3."

E. The following activities have occurred or are scheduled to occur on the Fairgrounds property:

(1) Activities that have received their own Recreation and Entertainment License from the County Board in 2015 and 2016 are:

a. Rodeos – June 27, 2015, August 30, 2015, September 26, 2015;

b. Car-X Crazy K, September 19, 2015;

c. Dance, June 25, 2016; and

d. Christian Music Festival, June 30 – July 3, 2016

(2) Activities listed in Champaign County Fair Association's Recreation and Entertainment License for 2016 are:

a. Hoof N Horn, April 1 – 2, 2016;

b. Derby Icon, April 14 – 16, 2016;

c. Humane Society, May 8 – 31, 2016;

d. Audio Feed, June 30 – July 5, 2016;

e. Hammer Down Tractor Pull, July 15 – 16, 2016;

f. Champaign County Fair, July 22 – July 30, 2016;

g. Lawnmower Derby, May 21, August 27, and December 4, 2016

h. Haunted Barn, Fridays and Saturdays in October 2016

F. On June 17, 2016, staff became aware of a BMX track to be constructed on the east side of the Fairgrounds. The Department is waiting for additional information before determining if the track will become a part of the proposed Special Use Permit, or if it will require its own hearing process.

GENERALLY REGARDING SPECIFIC ORDINANCE REQUIREMENTS

6. Regarding the requested Special Uses in the CR Zoning District:

A. Subparagraph 4.2.1 C.4. states, "PARKlNG LOT and related pick up stations may be authorized in the CR District only as an additional principal USE or additional principal STRUCTURE on Public Fairgrounds by SPECIAL USE Permit subject to Section 5.2."

B. Section 5.2. includes "PARKING GARAGE or LOT" as a Principal Use.

(1) Footnote 22 states: "PARKING LOT and related passenger waiting buildings may be authorized in the CR District only as an additional principal USE or additional principal STRUCTURE on Public Fairgrounds by SPECIAL USE Permit subject to the standard conditions in Section 6.1.3. provided that the Public Fairgrounds were an established use at the subject location on October 10, 1973, and provided that a Public Fair must continue to be held at the Public Fairgrounds or the Special Use Permit shall become void and subject to the standard conditions in Section 6.1.3."

C. The following definitions from the *Zoning Ordinance* are especially relevant to the requested Special Use Permit (capitalized words are defined in the Ordinance):

(1) "ACCESSORY BUILDING" is a BUILDING on the same LOT with the MAIN or PRINCIPAL STRUCTURE, or the main or principal USE, either detached from or attached to the MAIN or PRINCIPAL STRUCTURE, and subordinate to and used for purposes customarily incidental to the MAIN or PRINCIPAL STRUCTURE, or the main or principal USE.

(2) "ACCESSORY STRUCTURE" is a STRUCTURE on the same LOT with the MAIN OR PRINCIPAL STRUCTURE, or the main or principal USE, either DETACHED from or ATTACHED to the MAIN OR PRINCIPAL STRUCTURE, subordinate to and USED for purposes customarily incidental to the MAIN OR PRINCIPAL STRUCTURE or the main or principal USE.

(3) "ACCESSORY USE" is a USE on the same LOT customarily incidental and subordinate to the main or principal USE or MAIN or PRINCIPAL STRUCTURE.

(4) "AGRICULTURE" is the growing, harvesting and storing of crops including legumes, hay, grain, fruit and truck or vegetable crops, floriculture, horticulture, mushroom growing, orchards, forestry, and the keeping, raising, and feeding of livestock or poultry, including dairying, poultry, swine, sheep, beef cattle, pony and horse production, fur farms, and fish and wildlife farms; farm BUILDINGS used for growing, harvesting, and preparing crop products for market, or for use on the farm; roadside stands, farm BUILDINGS for storing and protecting farm machinery and equipment from the elements, for housing livestock or poultry and for preparing livestock or poultry products for market; farm DWELLINGS occupied by farm OWNERS, operators, tenants or seasonal or year-round hired farm workers. It is intended by this definition to include within the definition of AGRICULTURE all types of agricultural operations, but to exclude therefrom industrial operations such as a grain elevator, canning, or slaughterhouse, wherein agricultural products produced primarily by others are stored or processed. Agricultural purposes include, without limitation, the growing, developing, processing, conditioning, or selling of hybrid seed corn, seed beans, seed oats, or other farm seeds.

(5) "AREA, BUILDING" is the total area taken on a horizontal plane at the largest floor level of the MAIN or PRINCIPAL BUILDING and all ACCESSORY

BUILDINGS on the same LOT exclusive of uncovered porches, terraces, steps, or awnings, marquees, and nonpermanent CANOPIES and planters.

(6) "AREA, LOT" is the total area within the LOT LINES.

(7) "BEST PRIME FARMLAND" is Prime Farmland Soils identified in the Champaign County Land Evaluation and Site Assessment (LESA) System that under optimum management have 91% to 100% of the highest soil productivities in Champaign County, on average, as reported in the *Bulletin 811 Optimum Crop Productivity Ratings for Illinois Soils*. Best Prime Farmland consists of the following:

a. Soils identified as Agriculture Value Groups 1, 2, 3 and/or 4 in the Champaign County LESA system;

b. Soils that, in combination on a subject site, have an average LE of 91 or higher, as determined by the Champaign County LESA system;

c. Any development site that includes a significant amount (10% or more of the area proposed to be developed) of Agriculture Value Groups 1, 2, 3 and/or 4 soils as determined by the Champaign County LESA system.

(8) "BUILDING" is an enclosed STRUCTURE having a roof supported by columns, walls, arches, or other devices and used for the housing, shelter, or enclosure of persons, animal, and chattels.

(9) "BUILDING, ATTACHED" is a BUILDING having two walls in common with other BUILDINGS.

(10) "BUILDING, DETACHED is a BUILDING having no walls in common with other BUILDINGS.

(11) "BUILDING, MAIN or PRINCIPAL" is the BUILDING in which is conducted the main or principal USE of the LOT on which it is located.

(12) "FRONTAGE" is that portion of a LOT abutting a STREET or ALLEY.

(13) "LOT" is a designated parcel, tract or area of land established by PLAT, SUBDIVISION or as otherwise permitted by law, to be used, developed or built upon as a unit.

(14) "LOT, CORNER" is a LOT located:
(a) at the junction of and abutting two or more intersecting STREETS; or
(b) at the junction of and abutting a STREET and the nearest shoreline or high water line of a storm of floodwater runoff channel or basin; or
(c) at and abutting the point of abrupt change of a single STREET where the interior angle is less than 135 degrees and the radius of the STREET is less than 100 feet.

(15) "LOT LINE, FRONT" is a line dividing a LOT from a STREET or easement of ACCESS. On a CORNER LOT or a LOT otherwise abutting more than one STREET or easement of ACCESS only one such LOT LINE shall be deemed the FRONT LOT LINE.

(16) "LOT LINE, REAR" is any LOT LINE which is generally opposite and parallel to the FRONT LOT LINE or to a tangent to the midpoint of the FRONT LOT LINE. In the case of a triangular or gore shaped LOT or where the LOT comes to a point opposite the FRONT LOT LINE it shall mean a line within the LOT 10 feet long and parallel to and at the maximum distance from the FRONT LOT LINE or said tangent.

(17) "LOT LINES" are the lines bounding a LOT.

(18) "NONCONFORMING LOT, STRUCTURE or USE" is a LOT, SIGN, STRUCTURE, or USE that existed on the effective date of the adoption or amendment of this ordinance which does not conform to the regulations and standards of the DISTRICT in which it is located.

(19) "PARKING GARAGE or LOT" is a LOT, COURT, YARD, or portion thereof used for the parking of vehicles containing one or more PARKING SPACES together with means of ACCESS to a public way.

(20) "PARKING SPACE" is a space ACCESSORY to a USE or STRUCTURE for the parking of one vehicle.

(21) "PUBLIC ASSEMBLY USE" is a USE where more than fifty persons congregate or assemble for any purpose, including a cabaret, banquet hall, church, concert hall, dance hall, exhibition hall, lecture room, music hall, THEATER, grandstand, tents and similar outdoor and indoor USES.

(22) "SPECIAL CONDITION" is a condition for the establishment of a SPECIAL USE.

(23) "SPECIAL USE" is a USE which may be permitted in a DISTRICT pursuant to, and in compliance with, procedures specified herein.

(24) "STORAGE" is the presence of equipment, or raw materials or finished goods (packaged or bulk) including goods to be salvaged and items awaiting maintenance or repair and excluding the parking of operable vehicles.

(25) "STREET" is a thoroughfare dedicated to the public within a RIGHT-OF-WAY which affords the principal means of ACCESS to abutting PROPERTY. A STREET may be designated as an avenue, a boulevard, a drive, a highway, a lane, a parkway, a place, a road, a thoroughfare, or by other appropriate names. STREETS are identified on the Official Zoning Map according to type of USE, and generally as follows:

(a) MAJOR STREET: Federal or State highways.
(b) COLLECTOR STREET: COUNTY highways and urban arterial STREETS.
(c) MINOR STREET: Township roads and other local roads.

(26) "STRUCTURE" is anything CONSTRUCTED or erected with a fixed location on the surface of the ground or affixed to something having a fixed location on the surface of the ground. Among other things, STRUCTURES include BUILDINGS, walls, fences, billboards, and SIGNS.

(27) "STRUCTURE, ATTACHED" is a STRUCTURE connected to another STRUCTURE.

(28) "STRUCTURE, DETACHED" is a STRUCTURE not connected to another STRUCTURE.

(29) "STRUCTURE, MAIN or PRINCIPAL" is the STRUCTURE in or on which is conducted the main or principal USE of the LOT on which it is located.

(30) "SUITED OVERALL" is a discretionary review performance standard to describe the site on which a development is proposed. A site may be found to be SUITED OVERALL if the site meets these criteria:

a. The site features or site location will not detract from the proposed use;
b. The site will not create a risk to health, safety or property of the occupants, the neighbors or the general public;
c. The site is not clearly inadequate in one respect even if it is acceptable in other respects;
d. Necessary infrastructure is in place or provided by the proposed development; and
e. Available public services are adequate to support the proposed development effectively and safely.

(31) "USE" is the specific purpose for which land, a STRUCTURE or PREMISES, is designed, arranged, intended, or for which it is or may be occupied or maintained. The term "permitted USE" or its equivalent shall not be deemed to include any NONCONFORMING USE.

(32) "WELL SUITED OVERALL" is a discretionary review performance standard to describe the site on which a development is proposed. A site may be found WELL SUITED OVERALL if the site meets these criteria:

a. The site is one on which the proposed development can be safely and soundly accommodated using simple engineering and common, easily maintained construction methods with no unacceptable negative effects on neighbors or the general public; and
b. The site is reasonably well-suited in all respects and has no major defects.

(33) "YARD" is an OPEN SPACE, other than a COURT, of uniform width or depth on the same LOT with a STRUCTURE, lying between the STRUCTURE and the

nearest LOT LINE and which is unoccupied and unobstructed from the surface of the ground upward except as may be specifically provided by the regulations and standards herein.

(34) "YARD, FRONT" is a YARD extending the full width of a LOT and situated between the FRONT LOT LINE and the nearest line of a PRINCIPAL STRUCTURE located on said LOT. Where a LOT is located such that its REAR and FRONT LOT LINES each but a STREET RIGHT-OF-WAY both such YARDS shall be classified as front YARDS.

(35) "YARD, REAR" is a YARD extending the full width of a LOT and situated between the REAR LOT LINE and the nearest line of a PRINCIPAL STRUCTURE located on said LOT.

D. Subsection 6.1 contains standard conditions that apply to all SPECIAL USES, standard conditions that may apply to all SPECIAL USES, and standard conditions for specific types of SPECIAL USES. Relevant requirements from Subsection 6.1 are as follows:

(1) Paragraph 6.1.2 A. indicates that all Special Use Permits with exterior lighting shall be required to minimize glare on adjacent properties and roadways by the following means:

a. All exterior light fixtures shall be full-cutoff type lighting fixtures and shall be located and installed so as to minimize glare and light trespass. Full cutoff means that the lighting fixture emits no light above the horizontal plane.

b. No lamp shall be greater than 250 watts and the Board may require smaller lamps when necessary.

c. Locations and numbers of fixtures shall be indicated on the site plan (including floor plans and building elevations) approved by the Board.

d. The Board may also require conditions regarding the hours of operation and other conditions for outdoor recreational uses and other large outdoor lighting installations.

e. The Zoning Administrator shall not approve a Zoning Use Permit without the manufacturer's documentation of the full-cutoff feature for all exterior light fixtures.

E. Section 7.4.1 refers to parking requirements for a facility such as the proposed Special Use:

(1) For BUILDINGS and other enclosed STRUCTURES, one PARKING SPACE for each five seats provided for patrons use, or at least one PARKING SPACE for each 200 square feet of floor area, whichever requires the greater number of PARKING SPACES.

(2) For outdoor areas, including non-permanent STRUCTURES, used for exhibit, educational, entertainment, recreational, or other purpose involving assemblage of

patrons, one PARKING SPACE per three patrons based on the estimated number of patrons during peak attendance on a given day during said USE is in operation.

(3) When a USE involves a combination of enclosed BUILDINGS or STRUCTURES and an outdoor area, the required PARKING SPACES shall be calculated separately per the above standards and then totaled to obtain the required PARKING SPACES for said USE.

(4) Section 7.4.1 C.4. states that required parking screens for commercial establishments shall be provided as follows:

a. Parking areas for more than four vehicles of no more than 8,000 pounds gross vehicle weight each, excluding any vehicles used for hauling solid waste except those used for hauling construction debris and other inert materials, located within any YARD abutting any residential DISTRICT or visible from and located within 100 feet from the BUILDING RESTRICTION LINE of a lot containing a DWELLING conforming as to USE shall be screened with a Type A SCREEN except that a TYPE B SCREEN may be erected along the rear LOT LINE of the business PROPERTY.

b. Parking areas for any number of vehicles exceeding 8,000 pounds in gross vehicle weight each or any number of vehicles used for hauling solid waste except those used for hauling construction debris and other inert materials located within any YARD abutting any residential DISTRICT or visible from and located within 100 feet from the BUILDING RESTRICTION LINE of a lot containing a DWELLING conforming as to USE shall be screened with a Type D SCREEN.

F. Section 9.1.11 requires that a Special Use Permit shall not be granted by the Zoning Board of Appeals unless the public hearing record and written application demonstrate the following:

(1) That the Special Use is necessary for the public convenience at that location;

(2) That the Special Use is so designed, located, and proposed as to be operated so that it will not be injurious to the DISTRICT in which it shall be located or otherwise detrimental to the public welfare except that in the CR, AG-1, and AG-2 DISTRICTS the following additional criteria shall apply:

a. The property is either BEST PRIME FARMLAND and the property with proposed improvements is WELL SUITED OVERALL or the property is not BEST PRIME FARMLAND and the property with proposed improvements is SUITED OVERALL.

b. The existing public services are available to support the proposed SPECIAL USE effectively and safely without undue public expense.

c. The existing public infrastructure together with proposed improvements is adequate to support the proposed development effectively and safely without undue public expense.

(3) That the Special Use conforms to the applicable regulations and standards of and preserves the essential character of the DISTRICT in which it shall be located, except where such regulations and standards are modified by Section 6.

(4) That the Special Use is in harmony with the general purpose and intent of this ordinance.

(5) That in the case of an existing NONCONFORMING USE, it will make such USE more compatible with its surroundings.

(6) That the SPECIAL USE Permit shall authorize USE, CONSTRUCTION and operation only in a manner that is fully consistent with all testimony and evidence submitted by the petitioner or petitioner's agent(s).

G. Paragraph 9.1.11.D.2. states that in granting any SPECIAL USE permit, the BOARD may prescribe SPECIAL CONDITIONS as to appropriate conditions and safeguards in conformity with the Ordinance. Violation of such SPECIAL CONDITIONS when made a party of the terms under which the SPECIAL USE permit is granted, shall be deemed a violation of this Ordinance and punishable under this Ordinance.

GENERALLY REGARDING WHETHER THE SPECIAL USE IS NECESSARY FOR THE PUBLIC CONVENIENCE AT THIS LOCATION

7. Generally regarding the *Zoning Ordinance* requirement that the proposed Special Use is necessary for the public convenience at this location:
   A. The Petitioner has testified on the application, **"Additional paved parking is needed to serve the site which will reduce parking on grass areas for site events."**

   B. In coordination with the Champaign County Fair Association, Carle Hospital runs two shuttle routes through the Fairgrounds parking lot, making stops at 4 existing pick up stations. These routes have been in service for many years, providing transportation to the Carle campus for employees, visitors, and patients.
      (1) Shuttle routes and scheduling information was received from Berns, Clancy and Associates on May 31, 2016.
         a. The Green shuttle runs every 9 minutes between the Fairgrounds and the North Tower at Park Street between 4:30 a.m. and 12:30 a.m.

         b. The Blue shuttle runs approximately every 10 minutes between the Fairgrounds and the other areas of the Carle campus between 6:00 a.m. and 7:00 p.m.

   C. Pauline Walker, 1210 North Busey Avenue, Urbana, called the Zoning Department on June 3, 2016 and commented that when the Fairgrounds is busy, people park anywhere outside the fairgrounds, perhaps not knowing that they can park inside the Fairgrounds.

She stated that it is difficult to turn onto Coler Avenue from Sunset Avenue when the Fairgrounds are in use.

GENERALLY REGARDING WHETHER THE SPECIAL USE WILL BE INJURIOUS TO THE DISTRICT OR OTHERWISE INJURIOUS TO THE PUBLIC WELFARE

8. Generally regarding the *Zoning Ordinance* requirement that the proposed Special Use be designed, located, and operated so that it will not be injurious to the District in which it shall be located, or otherwise detrimental to the public welfare:

   A. The Petitioner has testified on the application, **"The storage building relocation and parking expansion will only serve the existing uses already at the site and will be constructed to match the character of the existing development. Perimeter landscaping will aid in screening for adjacent properties across Coler Avenue."**

   B. Regarding surface drainage:

      (1) A Natural Resource Report from the Champaign County Soil and Water Conservation District was not required.

      (2) As per the *Stormwater Management and Erosion Control Ordinance,* the proposed parking lot has triggered the need for a Stormwater Drainage Plan because the amount of impervious area on the subject property exceeds the maximum allowed for being exempt from the Stormwater Drainage Plan requirement. See the discussion under item 9.C. of this Summary of Evidence.

   C. Regarding the Special Flood Hazard Areas Ordinance: see the discussion under item 9.D. of this Summary of Evidence.

   D. Regarding traffic, the following evidence is provided:

      (1) The subject property fronts Coler Avenue on the west and Fairview Avenue on the south.

      (2) The Illinois Department of Transportation measures traffic on various roads throughout the County and determines the annual average 24-hour traffic volume for those roads and reports it as Average Daily Traffic (ADT). The most recent ADT data is from 2011 in the vicinity of the subject property. Coler Avenue had an ADT of 2,150 adjacent to the subject property. There was no count available for Fairview Avenue.

      (3) Regarding traffic impacts:

         a. The Carle campus has expanded several times since the Fair Association last expanded parking at the Fairgrounds in 1995. The proposed 201 parking spaces will help meet increased demand.

         b. There are no new uses or structures on the Fairgrounds that would cause an increase in traffic.

(4) In coordination with the Champaign County Fair Association, Carle Hospital runs two shuttle routes through the Fairgrounds parking lot, making stops at 4 existing pick up stations. These routes have been in service for many years, providing transportation to the Carle campus for employees, visitors, and patients.

a. Shuttle routes and scheduling information was received from Berns, Clancy and Associates on May 31, 2016.

(a) The Green shuttle runs every 9 minutes between the Fairgrounds and the North Tower at Park Street between 4:30 a.m. and 12:30 a.m.

(b) The Blue shuttle runs approximately every 10 minutes between the Fairgrounds and the other areas of the Carle campus between 6:00 a.m. and 7:00 p.m.

(5) Pauline Walker, 1210 North Busey Avenue, Urbana, called the Zoning Department on June 3, 2016 and commented that when the Fairgrounds is busy, people park anywhere outside the fairgrounds, perhaps not knowing that they can park inside the Fairgrounds. She stated that it is difficult to turn onto Coler Avenue from Sunset Avenue when the Fairgrounds are in use.

(6) The Urbana Township Road Commissioner has been notified of this case, but no comments have been received.

E. Regarding fire protection on the subject property, the subject property is located within the Eastern Prairie Fire Protection District. The Fire Chief has been notified of this case but no comments have been received.

F. Regarding the Special Flood Hazard Areas Ordinance, the eastern edge of the subject property is within the flood hazard area as per FEMA Flood Insurance Rate Map (FIRM) panel 17019C0427D effective October 2, 2013.

(1) The proposed parking lot expansion is not within the flood hazard area.

G. The subject property is not considered BEST PRIME FARMLAND. The soil on the subject property consists of Xenia silt loam 291B, Drummer silty clay loam 152A, Senachwine silt loam 618B, Senachwine silt loam 618C2, Orthents 802B, Sawmill silty clay loam 3107A and Sunbury silt loam 234A and has an average LE of 77.

(1) The property has been developed as a Fairgrounds for over a century.

(2) The proposed parking area will not significantly change the use of the property.

H. Regarding outdoor lighting on the subject property:

(1) Sheet E1 of the Parking Lot Improvement Site Plans created by Berns Clancy and Associates received May 9, 2016 shows the locations and light fixture schedule.

(2) Manufacturer's specifications for the fixtures indicate that the lighting is full cutoff.

I. Regarding wastewater treatment and disposal on the subject property:

(1) The subject property has a septic system. The proposed parking lot will not require changes to the septic system.

J. Regarding life safety considerations related to the proposed Special Use:

(1) Champaign County has not adopted a building code. Life safety considerations are considered to a limited extent in Champaign County land use regulation as follows:

a. The Office of the State Fire Marshal has adopted the Code for Safety to Life from Fire in Buildings and Structures as published by the National Fire Protection Association (NFPA 101) 2000 edition, Life Safety Code, as the code for Fire Prevention and Safety as modified by the Fire Prevention and Safety Rules, 41 Ill. Adm Code 100, that applies to all localities in the State of Illinois.

b. The Office of the State Fire Marshal is authorized to enforce the Fire Prevention and Safety Rules and the code for Fire Prevention and Safety and will inspect buildings based upon requests of state and local government, complaints from the public, or other reasons stated in the Fire Prevention and Safety Rules, subject to available resources.

c. The Office of the State Fire Marshal currently provides a free building plan review process subject to available resources and subject to submission of plans prepared by a licensed architect, professional engineer, or professional designer that are accompanied by the proper Office of State Fire Marshal Plan Submittal Form.

d. Compliance with the Code for Fire Prevention and Safety is mandatory for all relevant structures anywhere in the State of Illinois whether or not the Office of the State Fire Marshal reviews the specific building plans.

e. Compliance with the Office of the State Fire Marshal's code for Fire Prevention and Safety is not required as part of the review and approval of Zoning Use Permit Applications.

K. Other than as reviewed elsewhere in this Summary of Evidence, there is no evidence to suggest that the proposed Special Use will generate either nuisance conditions such as odor, noise, vibration, glare, heat, dust, electromagnetic fields or public safety hazards such as fire, explosion, or toxic materials release, that are in excess of those lawfully permitted and customarily associated with other uses permitted in the zoning district.

GENERALLY REGARDING WHETHER THE SPECIAL USE CONFORMS TO APPLICABLE REGULATIONS AND STANDARDS AND PRESERVES THE ESSENTIAL CHARACTER OF THE DISTRICT

9. Generally regarding the *Zoning Ordinance* requirement that the proposed Special Use conform to all applicable regulations and standards and preserve the essential character of the District in which it shall be located, except where such regulations and standards are modified by Section 6 of the Ordinance:

A. The Petitioner has testified on the application: **"Yes."**

B. Regarding compliance with the *Zoning Ordinance*:

(1) The subject property is 53.79 acres.

(2) A Fairgrounds is a USE that has been deemed appropriate in the CR Conservation Recreation Zoning District provided that a Special Use Permit is authorized.

(3) In the CR Conservation Recreation Zoning District, the minimum lot size is 1 acre. The minimum average lot width is 200 feet. The subject property meets or exceeds these minimum requirements.

(4) The proposed site plan complies with all setback requirements.

(5) Regarding parking on the subject property:

a. The last parking expansion post-construction approval was for Zoning Use Permit #111-94-01 on November 23, 1994, providing a total of 1,065 existing spaces, with 23 of those handicap accessible.

b. The Zoning Administrator has determined that there is sufficient parking for the Fairgrounds land use.

c. No information has been provided about the demand for parking for the Carle Hospital complex, so it is unknown if there is additional demand beyond what the proposed parking lot at the Fairgrounds would provide.

d. Sheet 5 of 27 of the Parking Lot Improvement Site Plans created by Berns Clancy and Associates received May 9, 2016 indicates 199 new parking spaces and 2 new handicap accessible spaces, for a total of 1,266 spaces.

e. The proposed new parking is an increase of 201 spaces, or 19%.

C. Regarding surface drainage:

(1) A Natural Resource Report from the Champaign County Soil and Water Conservation District was not required.

(2) As per the *Stormwater Management and Erosion Control Ordinance,* the proposed parking lot has triggered the need for a Stormwater Drainage Plan because the amount of impervious area on the subject property exceeds the maximum allowed for being exempt from the Stormwater Drainage Plan requirement.

(3) The Ordinance states that stormwater detention is required if there is one acre or more of impervious surface area; the subject property has approximately 19.6 acres (36%) of impervious area. This includes the proposed 1.6 acre parking lot.

a. Storm water detention is not automatically required for the existing parking pavement because those expansions predated Special Use 962-S-94.

(4) A Stormwater Management Plan was received from Berns, Clancy and Associates on May 26, 2016. The City of Urbana engineering staff has agreed to review the storm water management plan for the County and that review is underway. The

review will be based on the City of Urbana requirements and will be consistent with the requirements of paragraph 4.2B. of the *Champaign County Storm Water Management and Erosion Control Ordinance*.

D. Regarding the new standard conditions for a Fairgrounds from Text Amendment 819-AT-15 that was adopted on March 17, 2016:

(1) Regarding effective site drainage:

a. The new parking lot relies primarily on surface drainage to lawn/landscape areas before dropping into a storm sewer system. Even snow that is pushed from the surface of the lot will melt into this system. As such, appropriate drainage is provided for the lot and there will be some ability to separate trash and some pollutants from the water prior to discharge to the storm sewer.

b. An even greater benefit is realized with the alternate basin as it will serve a much larger existing parking lot area. The existing site drainage is not changed on the existing parking lot, but the runoff will drain into a vegetated basin first and be detained before draining again to the same outlet storm sewer. This only produces benefits from a variety of perspectives.

(2) Regarding state and federal water quality standards:

a. There really are no state or federal discharge water quality standards for parking lots, other than the MS4 requirements. If this were an industrial site, there might be a Spill Prevention Control and Countermeasures Plan or other similar protocol for a pavement area. The alternate surface basin certainly helps in this direction. All runoff from this larger parking area will surface drain to the basin where the vegetation will aid in contaminant retention before discharge to the storm sewer (and then Crystal Lake).

(3) Regarding protection of downstream drainage patterns:

a. There will be no great impact either way to the downstream drainage patterns. Both the new and the existing parking lot areas drain now to the existing 54-inch diameter storm sewer that drains into Crystal Lake. Overall, this sewer serves a nearly 100 acre watershed. The incremental changes being proposed on the Fairgrounds site will result in unnoticeable changes to the drainage patterns. By creating the alternate basin, more of the runoff will first be routed to a detention basin, so flows may be detained to some extent – though the impact will be felt little due to the size of the overall watershed. The proposed improvement certainly does not negatively impact the downstream drainage patterns.

(4) Regarding stream flows that support healthy aquatic ecosystems:

a. Both the new and the existing parking areas drain to the existing 54-inch storm sewer so there is no immediate aquatic ecosystem. However, since the storm sewer drains to Crystal Lake, this is an important ecosystem to safeguard. The Urbana Park District is currently studying alterations to the

lake and affecting factors to enhance the aquatic habitat and ecosystem of the lake. The potential water quality improvement from the alternate surface detention basin should help in the proportion of the flow that is contributed by these areas.

(5) Regarding minimizing impacts on adjacent properties and causing no more than minimal disturbance to the stream corridor environment:

a. Adjacent properties include the neighborhood to the west across the street and Crystal Lake Park to the east. Providing more paved parking (and less parking on grass) will benefit the site and will not negatively impact the adjacent neighborhood. An increase parking supply at this location should remove some traffic from the adjacent neighborhood as it will reduce searching for a parking space. The parking will be available and be shared by several events.

b. The downstream corridor is Crystal Lake. These parking and storm water management improvements will not directly impact Crystal Lake other than providing some improved water quality for the runoff from these parking areas.

(6) Regarding preserving existing habitat, enhancing degraded habitat, and restoring habitat whenever possible:

a. There is no natural habitat at the site of the new parking area. It has long been lawn area in an urban environment that is used for grass parking and other uses throughout the year. Paving this area will not degrade any noted habitat. The installation of perimeter trees and screening will aid in the replacement of urban habitat.

b. The potential improvement of runoff water quality will aid (to a small extent) in the aquatic habitat of Crystal Lake. This, along with other measures to be undertaken by the Urbana Park District, should produce noticeable enhancement of the aquatic and riparian habitat.

E. Regarding the Special Flood Hazard Areas Ordinance:

(1) The eastern edge of the subject property is within the flood hazard area as per FIRM panel 17019C0427D effective October 2, 2013.

(2) The proposed parking lot expansion is not within the flood hazard area but a portion of the proposed stormwater detention basin is in the Special Flood Hazard Area in an area that is hydraulically connected to the floodplain.

F. Regarding the Subdivision Regulations, the subject property is located in the City of Urbana subdivision jurisdiction and the subject property is in compliance.

G. Regarding the requirement that the Special Use preserve the essential character of the CR Conservation Recreation District:

(1) A Fairgrounds is a USE that has been deemed appropriate in the CR Conservation Recreation Zoning District provided that a Special Use Permit is authorized.

(2) The visual character of the subject property will not change.

(3) Regarding traffic impacts:

a. The Carle campus has expanded several times since the Fair Association last expanded parking at the Fairgrounds in 1995. The proposed 201 parking spaces will help meet increased demand.

b. There are no new uses or structures on the Fairgrounds that would cause an increase in traffic.

H. The proposed Special Use must comply with the Illinois Accessibility Code which is not a County ordinance or policy and the County cannot provide any flexibility regarding that Code. A Zoning Use Permit cannot be issued for any part of the proposed Special Use until full compliance with the Illinois Accessibility Code has been indicated in drawings.

(1) A Statement of Compliance for accessibility is included on the Cover Sheet of the Parking Lot Improvement Site Plans created by Berns Clancy and Associates and received May 9, 2016.

GENERALLY REGARDING WHETHER THE SPECIAL USE IS IN HARMONY WITH THE GENERAL PURPOSE AND INTENT OF THE ORDINANCE

10. Regarding the *Zoning Ordinance* requirement that the proposed Special Use is in harmony with the general intent and purpose of the Ordinance:

A. Subsection 5.1.2 of the Zoning Ordinance states the general intent of the CR Conservation Recreation District and states as follows (capitalized words are defined in the Ordinance):

(1) The CR, Conservation-Recreation DISTRICT is intended to protect the public health by restricting development in areas subject to frequent or periodic floods and to conserve the natural and scenic areas generally along the major stream networks of the COUNTY.

(2) The types of uses authorized in the CR District are in fact the types of uses that have been determined to be acceptable in the CR District. Uses authorized by Special Use Permit are acceptable uses in the district provided that they are determined by the ZBA to meet the criteria for Special Use Permits established in paragraph 9.1.11 B. of the Ordinance.

B. Regarding whether the proposed Special Use Permit is in harmony with the general purpose of the Zoning Ordinance:

(1) Paragraph 2 .0 (a) of the Ordinance states that one purpose of the Ordinance is securing adequate light, pure air, and safety from fire and other dangers.

This purpose is directly related to the limits on building coverage and the minimum yard requirements in the Ordinance and the proposed site plan appears to be in compliance with those requirements.

(2) Paragraph 2.0 (b) of the Ordinance states that one purpose of the Ordinance is conserving the value of land, BUILDINGS, and STRUCTURES throughout the COUNTY. In regards to the value of nearby properties:

The requested Special Use Permit should not decrease the value of nearby properties.

(3) Paragraph 2.0 (c) of the Ordinance states that one purpose of the Ordinance is lessening and avoiding congestion in the public STREETS. In regards to congestion in the public STREETS:

a. In coordination with the Champaign County Fair Association, Carle Hospital runs two shuttle routes through the Fairgrounds parking lot, making stops at 4 existing pick up stations. These routes have been in service for many years, providing transportation to the Carle campus for employees, visitors, and patients.

(a) Shuttle routes and scheduling information was received from Berns, Clancy and Associates on May 31, 2016.

i. The Green shuttle runs every 9 minutes between the Fairgrounds and the North Tower at Park Street between 4:30 a.m. and 12:30 a.m.

ii. The Blue shuttle runs approximately every 10 minutes between the Fairgrounds and the other areas of the Carle campus between 6:00 a.m. and 7:00 p.m.

b. The Carle campus has expanded several times since the Fair Association last expanded parking at the Fairgrounds in 1995. The proposed 201 parking spaces will help meet increased demand.

c. There are no new uses or structures on the Fairgrounds that would cause an increase in traffic.

(4) Paragraph 2.0 (d) of the Ordinance states that one purpose of the Ordinance is lessening and avoiding the hazards to persons and damage to PROPERTY resulting from the accumulation of runoff from storm or flood waters.

See the discussion under item 9.D. of this Summary of Evidence.

(5) Paragraph 2.0 (e) of the Ordinance states that one purpose of the Ordinance is promoting the public health, safety, comfort, morals, and general welfare.

a. In regards to public safety, Pauline Walker, 1210 North Busey Avenue, Urbana, called the Zoning Department on June 3, 2016 and commented that when the Fairgrounds is busy, people park anywhere outside the Fairgrounds, perhaps not knowing that they can park inside the Fairgrounds. She stated that it is difficult to turn onto Coler Avenue from Sunset Avenue when the Fairgrounds are in use.

b. In regards to public comfort and general welfare, this purpose is similar to the purpose of conserving property values established in paragraph 2.0 (b) and is in harmony to the same degree.

(6) Paragraph 2.0 (f) states that one purpose of the Ordinance is regulating and limiting the height and bulk of BUILDINGS and STRUCTURES hereafter to be erected; and paragraph 2.0 (g) states that one purpose is establishing, regulating, and limiting the BUILDING or SETBACK lines on or along any STREET, trafficway, drive or parkway; and paragraph 2.0 (h) states that one purpose is regulating and limiting the intensity of the USE of LOT AREAS, and regulating and determining the area of OPEN SPACES within and surrounding BUILDINGS and STRUCTURES.

These three purposes are directly related to the limits on building height and building coverage and the minimum setback and yard requirements in the Ordinance and the proposed site plan appears to be in compliance with those limits.

(7) Paragraph 2.0 (i) of the Ordinance states that one purpose of the Ordinance is classifying, regulating, and restricting the location of trades and industries and the location of BUILDINGS, STRUCTURES, and land designed for specified industrial, residential, and other land USES; and paragraph 2.0 (j.) states that one purpose is dividing the entire COUNTY into DISTRICTS of such number, shape, area, and such different classes according to the USE of land, BUILDINGS, and STRUCTURES, intensity of the USE of LOT AREA, area of OPEN SPACES, and other classification as may be deemed best suited to carry out the purpose of the ordinance; and paragraph 2.0 (k) states that one purpose is fixing regulations and standards to which BUILDINGS, STRUCTURES, or USES therein shall conform; and paragraph 2.0 (l) states that one purpose is prohibiting USES, BUILDINGS, OR STRUCTURES incompatible with the character of such DISTRICT.

Harmony with these four purposes requires that the special conditions of approval sufficiently mitigate or minimize any incompatibilities between the proposed Special Use Permit and adjacent uses, and that the special conditions adequately mitigate any problematic conditions.

(8) Paragraph 2.0 (m) of the Ordinance states that one purpose of the Ordinance is preventing additions to and alteration or remodeling of existing BUILDINGS, STRUCTURES, or USES in such a way as to avoid the restrictions and limitations lawfully imposed under this ordinance.

The proposed uses are compliant with the Zoning Ordinance if a Special Use Permit is authorized.

(9) Paragraph 2.0 (n) of the Ordinance states that one purpose of the Ordinance is protecting the most productive AGRICULTURAL lands from haphazard and unplanned intrusions of urban USES.

a. The property has been in use as a Fairgrounds for over a century.

b. The proposed use will not take any agricultural land out of production.

(10) Paragraph 2.0 (o) of the Ordinance states that one purpose of the Ordinance is protecting natural features such as forested areas and watercourses.

The proposed parking lot area does not contain any natural features.

(11) Paragraph 2.0 (p) of the Ordinance states that one purpose of the Ordinance is encouraging the compact development of urban areas to minimize the cost of development of public utilities and public transportation facilities.

The proposed use will not require the development of public utilities or transportation facilities; the proposed parking lot will increase capacity of the surface parking system for the area.

(12) Paragraph 2.0 (q) of the Ordinance states that one purpose of the Ordinance is encouraging the preservation of AGRICULTURAL belts surrounding urban areas, to retain the AGRICULTURAL nature of the COUNTY, and the individual character of existing communities.

a. The property is surrounded by the City of Urbana.

b. The proposed use will not take any agricultural land out of production.

c. The proposed use will maintain the character of the existing community.

(13) Paragraph 2.0 (r) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to provide for the safe and efficient development of renewable energy sources in those parts of the COUNTY that are most suited to their development.

The proposed use will not hinder the development of renewable energy sources.

GENERALLY REGARDING WHETHER THE SPECIAL USE IS AN EXISTING NONCONFORMING USE

11. Regarding the *Zoning Ordinance* requirement that in the case of an existing NONCONFORMING USE the granting of the Special Use Permit will make the use more compatible with its surroundings:

A. The Petitioner has testified on the application: **"N/A"**

B. The existing use on the property is a conforming use except for the existing passenger waiting buildings in the parking lot which will be made conforming in Part B of this Special Use Permit.

GENERALLY REGARDING PROPOSED SPECIAL CONDITIONS OF APPROVAL

12. Regarding proposed special conditions of approval:

A. **All required certifications for the new stormwater drainage basin shall be submitted after construction prior to issuance of the Zoning Compliance Certificate.**

The special condition stated above is required to ensure the following:

That the drainage improvements conform to the requirements of the Storm water Management and Erosion Control Ordinance.

B. **Carle Hospital shuttle routes and scheduling shall comply with the Carle shuttle schedule and routes received May 31, 2016.**

The special condition stated above is required to ensure the following:

Public safety and minimizing traffic congestion and the impact on the neighborhood.

DOCUMENTS OF RECORD

1. Application for Special Use Permit received April 20, 2016, with attachments:
   - A Site Plan Sheet 5 of 24 for the proposed parking area created by Berns, Clancy and Assoc.
   - B Aerial photo of Fairgrounds from April 2011 Champaign County aerial orthophotography
   - C Legal description
2. Parking Lot Improvements Site Plan by Berns, Clancy and Assoc. received May 9, 2016
3. Annotated aerial photo by Berns, Clancy and Assoc. received May 9, 2016
4. Site Plan from Zoning Use Permit Application #111-94-01 approved May 5, 1994
5. Site Plan (staff prepared) from Case 962-S-94
6. Case File from Special Use Permit 962-S-94 approved March 2, 1995
7. Parking Expansions map created by staff on June 10, 2016
8. Ordinance #977 for Text Amendment Case 819-AT-16 dated March 17, 2016, with attachment:
   - A Amended Zoning Ordinance excerpt
9. Stormwater Management Plan by Berns, Clancy and Assoc. received May 26, 2016
10. Manufacturer's Specifications for outdoor lighting received May 25, 2016
11. Carle shuttle schedule and routes received May 31, 2016
12. Recreation and Entertainment License Applications for use of Fairgrounds, 2015 and 2016
13. Letter of Support from Urbana Park District received January 13, 2016
14. Preliminary Memorandum dated June 9, 2016 with attachments:
   - A Case Maps (Location, Land Use, Zoning)
   - B Annotated aerial photo by Berns, Clancy and Assoc. received May 9, 2016
   - C Carle Foundation Hospital / Champaign County Fairgrounds Parking Lot Improvements Site Plans (27 sheets) by Berns, Clancy and Assoc. received May 9, 2016
   - D Site Plan Sheet 5 of 24 for the proposed parking area created by Berns, Clancy and Assoc. received April 20, 2016
   - E Site Plan from Zoning Use Permit Application #111-94-01 approved May 5, 1994
   - F Site Plan (staff prepared) from Case 962-S-94
   - G Finding of Fact and Final Determination for Case 962-S-94 dated March 16, 1995
   - H Parking Expansions map created by staff on June 10, 2016
   - I Ordinance #977 for Text Amendment Case 819-AT-16 dated March 17, 2016, with attachment: Amended Zoning Ordinance excerpt
   - J Stormwater Management Plan by Berns, Clancy and Assoc. received May 26, 2016
   - K Manufacturer's Specifications for outdoor lighting received May 25, 2016
   - L Carle shuttle schedule and routes received May 31, 2016
   - M Letter of Support from Urbana Park District received January 13, 2016
   - N Site Images taken May 20, 2016 and June 15, 2016
   - O Draft Summary of Evidence, Finding of Fact, and Final Determination

FINDINGS OF FACT

From the documents of record and the testimony and exhibits received at the public hearing for zoning case **836-S-16** held on **June 30, 2016,** the Zoning Board of Appeals of Champaign County finds that:

1. The requested Special Use Permit ***{IS / IS NOT}*** necessary for the public convenience at this location because:_____

2. The requested Special Use Permit ***{SUBJECT TO THE SPECIAL CONDITIONS IMPOSED HEREIN}*** is so designed, located, and proposed to be operated so that it ***{WILL NOT / WILL}*** be injurious to the district in which it shall be located or otherwise detrimental to the public health, safety, and welfare because:
   a. The street has ***{ADEQUATE / INADEQUATE}*** traffic capacity and the entrance location has ***{ADEQUATE / INADEQUATE}*** visibility.
   b. Emergency services availability is ***{ADEQUATE / INADEQUATE} {because*}***:
   _____
   c. The Special Use ***{WILL / WILL NOT}*** be compatible with adjacent uses ***{because*}***:
   _____
   d. Surface and subsurface drainage will be ***{ADEQUATE / INADEQUATE} {because*}:***
   _____
   e. Public safety will be ***{ADEQUATE / INADEQUATE} {because*}***:
   _____
   f. The provisions for parking will be ***{ADEQUATE / INADEQUATE} {because*}***:
   _____
   g. The property ***{IS/IS NOT}*** SUITED OVERALL for the proposed improvements ***{because*}:***_____
   h. Existing public services ***{ARE/ARE NOT}*** available to support the proposed SPECIAL USE without undue public expense ***{because*}:***_____
   i. Existing public infrastructure together with the proposed development ***{IS/IS NOT}*** adequate to support the proposed development effectively and safely without undue public expense ***{because*}:*** _____

   (Note the Board may include other relevant considerations as necessary or desirable in each case.)

*The Board may include additional justification if desired, but it is not required.

3a. The requested Special Use Permit ***{SUBJECT TO THE SPECIAL CONDITIONS IMPOSED HEREIN} {DOES / DOES NOT}*** conform to the applicable regulations and standards of the DISTRICT in which it is located.

3b. The requested Special Use Permit ***{SUBJECT TO THE SPECIAL CONDITIONS IMPOSED HEREIN} {DOES / DOES NOT}*** preserve the essential character of the DISTRICT in which it is located because:
   a. The Special Use will be designed to ***{CONFORM / NOT CONFORM}*** to all relevant County ordinances and codes.
   b. The Special Use ***{WILL / WILL NOT}*** be compatible with adjacent uses.
   c. Public safety will be ***{ADEQUATE / INADEQUATE}***.

4. The requested Special Use Permit ***{SUBJECT TO THE SPECIAL CONDITIONS IMPOSED HEREIN} {IS / IS NOT}*** in harmony with the general purpose and intent of the Ordinance because:
   a. The Special Use is authorized in the District.
   b. The requested Special Use Permit ***{IS/ IS NOT}*** necessary for the public convenience at this location.
   c. The requested Special Use Permit ***{SUBJECT TO THE SPECIAL CONDITIONS IMPOSED HEREIN}*** is so designed, located, and proposed to be operated so that it ***{WILL / WILL NOT}*** be injurious to the district in which it shall be located or otherwise detrimental to the public health, safety, and welfare.
   d. The requested Special Use Permit ***{SUBJECT TO THE SPECIAL CONDITIONS IMPOSED HEREIN} {DOES / DOES NOT}*** preserve the essential character of the DISTRICT in which it is located.

5. The requested Special Use ***IS*** an existing nonconforming use.

6. ***{NO SPECIAL CONDITIONS ARE HEREBY IMPOSED / THE SPECIAL CONDITIONS IMPOSED HEREIN ARE REQUIRED TO ENSURE COMPLIANCE WITH THE CRITERIA FOR SPECIAL USE PERMITS AND FOR THE PARTICULAR PURPOSES DESCRIBED BELOW:***

   A. **All required certifications for the new stormwater drainage basin shall be submitted after construction prior to issuance of the Zoning Compliance Certificate.**

      The special condition stated above is required to ensure the following:

      That the drainage improvements conform to the requirements of the Storm water Management and Erosion Control Ordinance.

   B. **Carle Hospital shuttle routes and scheduling shall comply with the Carle shuttle schedule and routes received May 31, 2016.**

      The special condition stated above is required to ensure the following:

      Public safety and minimizing traffic congestion and the impact on the neighborhood.

FINAL DETERMINATION

The Champaign County Zoning Board of Appeals finds that, based upon the application, testimony, and other evidence received in this case, the requirements of Section 9.1.11B. for approval ***{HAVE/ HAVE NOT}*** been met, and pursuant to the authority granted by Section 9.1.6 B. of the Champaign County Zoning Ordinance, determines that:

The Special Use requested in Case **836-S-16** is hereby ***{GRANTED/ GRANTED WITH SPECIAL CONDITIONS / DENIED}*** to the applicant **Michael Kobel, President, Champaign County Fair Association,** to authorize the following:

Authorize a Special Use Permit in the CR Conservation Recreation Zoning District for the following:

Part A: Authorize the expansion of a Fairgrounds that was previously authorized as a Special Use Permit in Case 962-S-94; and

Part B: Authorize the use of an existing Parking Lot as an additional principal use and the use of existing parking related pick up stations as additional principal structures on a Fairgrounds; and

Part C: Authorize the construction and use of a proposed Parking Lot as an additional principal use and a proposed related passenger waiting building as an additional principal structure on a Fairgrounds.

SUBJECT TO THE FOLLOWING SPECIAL CONDITIONS:

A. **All required certifications for the new stormwater drainage basin shall be submitted after construction prior to issuance of the Zoning Compliance Certificate.**

The special condition stated above is required to ensure the following:

That the drainage improvements conform to the requirements of the Storm water Management and Erosion Control Ordinance.

B. **Carle Hospital shuttle routes and scheduling shall comply with the Carle shuttle schedule and routes received May 31, 2016.**

The special condition stated above is required to ensure the following:

Public safety and minimizing traffic congestion and the impact on the neighborhood.

The foregoing is an accurate and complete record of the Findings and Determination of the Zoning Board of Appeals of Champaign County.

SIGNED: ATTEST:

Eric Thorsland, Chair
Champaign County Zoning Board of Appeals

Secretary to the Zoning Board of Appeals

Date