McHenry County College

Fire Tower Replacement

8900 Northwest Hwy #14,
Crystal Lake, IL 60012

DKA PROJECT NO: 25-028

MCC BID NO: IFB#05142026_FT

ISSUED FOR BID - NOT FOR CONTRUCTION

04/21/2026

ARCHITECT

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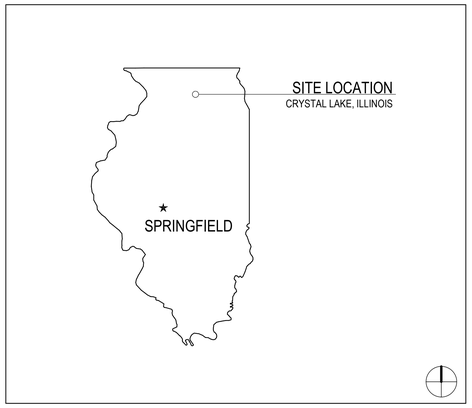
ELECTRICAL ENGINEER

20/10 ENGINEERING
1216 TOWER ROAD
SCHAUMBURG, IL, 60173
P: 847.882.2010

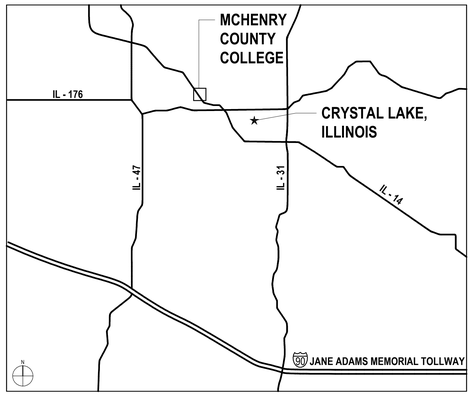
ABBREVIATIONS

AP	ACCESS PANEL
ACOUST	ACOUSTICAL
ACT	ACOUSTICAL CEILING TILE
ADJ	ADJACENT
A.F.F.	ABOVE FINISH FLOOR
AGGR	AGGREGATE
A/C	AIR CONDITIONING
ALT	ALTERNATE
ALUM	ALUMINUM
L	ANGLE
APPD	APPROVED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL OR ARCHITECT
AD	AREA DRAIN
ASB	ASBESTOS
ASPH	ASPHALT
A/V	AUDIO VISUAL
BSMT	BASEMENT
BRG	BEARING
BM	BEAM
BTW	BETWEEN
BITUM	BITUMINOUS
BLK	BLOCK
BLKG	BLOCKING
BD	BOARD
BRK	BRICK
BLDG	BUILDING
CAB	CABINET
CIP	CAST IN PLACE
CIPC	CAST IN PLACE CONCRETE
CI	CURB INLET
CB	CATCH BASIN
CLG	CEILING
CTR	CENTER
CJ	CONTROL JOINT
CL	CENTER LINE
CPT	CARPET
CT	CERAMIC TILE
CLR	CLEAR
CLO	CLOSET
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CM	CONSTRUCTION MANAGER
CONT	CONTINUOUS OR CONTINUE
CONTR	CONTRACTOR
CK	CORK
CORR	CORRIDOR
CNSK	COUNTERSUNK
CRS	COURSE
DEMO	DEMOLISH OR DEMOLITION
DEPT	DEPARTMENT
DL	DEAD LOAD
DIA	DIAMETER
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DR	DOOR
DO	DOOR OPENING
DBL	DOUBLE
DS	DOWNSPOUT
DRW	DRAWER
DWG	DRAWING
DF	DRINKING FOUNTAIN
DS	DRY STANDPIPE
DWT	DETECTABLE WARNING TILE
E	EAST
EA	EACH
EIFS	EXTERIOR INSULATION FINISH SYSTEM
ELEC	ELECTRICAL
ETC	ELECTRICAL TRADES CONTRACTOR
EWC	ELECTRICAL WATER COOLER
EP	ELECTRICAL PANEL BOARD
EL	ELEVATION
ELEV	ELEVATION
ELVTR	ELEVATOR
ENCL	ENCLOSURE
EMER	EMERGENCY
EP PT	EPOXY PAINT
EPF	EPOXY FLOORING
EQ	EQUAL
EQPMT	EQUIPMENT
EXSTG	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXPD	EXPOSED
EXTR	EXTERIOR
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOS	FACE OF STUD
FR	FIBERGLASS REINFORCED PANEL
FIN	FINISH OR FINISHED
FA	FIRE ALARM
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET
FPRF	FIREPROOF
FB	FLAT BAR STOCK
FL	FLOOR
FD	FLOOR DRAIN
FLUOR	FLUORESCENT
FT	FOOT OR FEET
FTG	FOOTING
FDN	FOUNDATION
FRM	FRAME
FRMG	FRAMING
FS	FULL SIZE
FURR	FURRING
FUTR	FUTURE
FW	FABRIC WALLCOVERING
GA	GAUGE
GALV	GALVANIZED
GEN	GENERAL
GC	GENERAL CONTRACTOR
GTC	GENERAL TRADES CONTRACTOR
GL	GLASS OR GLAZING
GD	GRADE
GND	GROUND
GYP BD	GYPSUM BOARD
HDW	HARDWARE
HDWD	HARDWOOD
HDR	HEADER
HTG	HEATING
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HT	HEIGHT
HC	HOLLOW CORE
HM	HOLLOW METAL
HMF	HOLLOW METAL FRAME
HORZ	HORIZONTAL
HB	HOSE BIB
HR	HOUR
INC	INCLUDE
I.D.	INSIDE DIAMETER
INSUL	INSULATION
INTR	INTERIOR
INV	INVERT
JAN	JANITOR
JT	JOINT
KIT	KITCHEN
LAM	LAMINATE
LAV	LAVATORY
LH	LEFT HAND
LGTH	LENGTH
LT	LIGHT
LWC	LIGHT WEIGHT CONCRETE
LTL	LINTEL
LN	LINOLEUM
LL	LIVE LOAD
MH	MANHOLE
MFR	MANUFACTURER
MAS	MASONRY
MO	MASONRY OPENING
MTL	METAL
MAX	MAXIMUM
MECH	MECHANICAL
MTC	MECHANICAL TRADES CONTRACTOR
MEMB	MEMBRANE
MT	MARBLE TILE
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNDED
MTG	MOUNTING
MUL	MULLION
NOM	NOMINAL
N	NORTH
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO OR #	NUMBER
OBS	OBSCURE
OFF	OFFICE
O.C.	ON CENTER
OPNG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
O.D.	OUTSIDE DIAMETER
OA	OVERALL
OFD	OVERFLOW DRAIN
PT	PAINT
PTD	PAINTED
PR	PAIR
PNL	PANEL
PBD	PARTICLE BOARD
PTN	PARTITION
PLAS	PLASTIC
P-LAM	PLASTIC LAMINATE
PL	PLATE
PTC	PLUMBING TRADES CONTRACTOR
PLYWD	PLYWOOD
PSI	POUNDS PER SQUARE INCH
PC	PRECAST
PCC	PRECAST CONCRETE
QT	QUARRY TILE
R	RADIUS
RWL	RAIN WATER LEADER
RFRG	REFRIGERATOR
RGTR	REGISTER
REINF	REINFORCED
RQD	REQUIRED
RES	RESILIENT
RA	RETURN AIR
RAG	RETURN AIR GRILLE
RH	RIGHT HAND
ROW	RIGHT OF WAY
R	RISER
RD	ROOF DRAIN
RM	ROOM
R.O.	ROUGH OPENING
RB	RUBBER BASE
SECT	SECTION
SK	SINK
SCHED	SCHEDULE
SHTG	SHEATHING
SHT	SHEET
SV	SHEET VINYL
SHWR	SHOWER
SIM	SIMILAR
SC	SEALED CONCRETE
SPM	SINGLE PLY MEMBRANE
S	SOUTH
SFRM	SPRAY APPLIED FIRE RESISTIVE MATERIAL
SPEC	SPECIFICATION
SQ	SQUARE
S.S.	STAINLESS STEEL
STD	STANDARD
STA	STATION
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURE OR STRUCTURAL
SUSP	SUSPENDED
SAT	SUSPENDED ACOUSTICAL TILE
SYM	SYMMETRICAL
TEL	TELEPHONE
TV	TELEVISION
TRZ	TERRAZZO
TB	TILE BASE
THK	THICK
T.O.C.	TOP OF CURB
TOP	TOP OF PAVEMENT
TOW	TOP OF WALL
T&G	TONGUE AND GROOVE
TYP	TYPICAL
UNF	UNFINISHED
U.N.O.	UNLESS NOTED OTHERWISE
UR	URINAL
VB	VINYL BASE
VERT	VERTICAL
VEST	VESTIBULE
VCT	VINYL COMPOSITION TILE
VW	VINYL WALLCOVERING
WSCT	WAINSCOT
WC	WATER CLOSET
WLK	WALK-OFF MAT
WR	WATER RESISTANT
WT	WALL TILE OR WEIGHT
W	WEST
W	WIDE FLANGE "W16x21"
W	WIDTH
W/	WITH
W/O	WITHOUT
WD	WOOD
WDP	WOOD PANEL
X	EXISTING

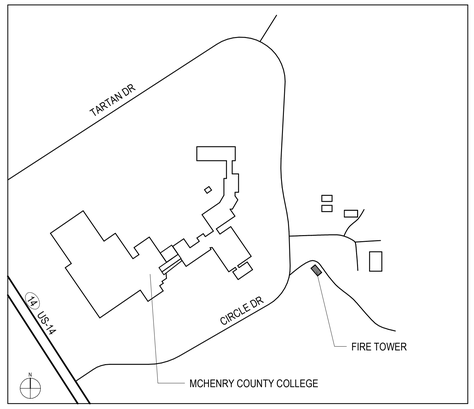
STATE LOCATION MAP



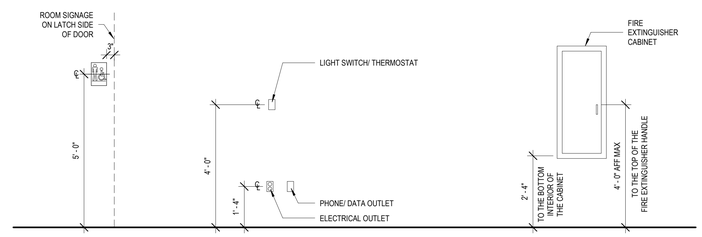
AREA MAP



CAMPUS MAP



SHEET INDEX



NOTE: IN THE EVENT OF A CONFLICT BETWEEN DIMENSIONS SHOWN ON THIS DRAWING AND ANY OTHER ARCHITECTURAL, ELECTRICAL, OR MECHANICAL SHEETS OR SPECIFICATIONS, NOTIFY ARCHITECT OF DISCREPANCY.

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KEY PLAN:

SHEET STATUS: 04/21/2026

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NO:	DESCRIPTION:	DATE:

SHEET TITLE:

SHEET INDEX, ABBREVIATIONS, SYMBOLS & NOTES

SHEET NUMBER:

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MCHENRY COUNTY COLLEGE
FIRE TOWER REPLACEMENT
8900 US-14
CRYSTAL LAKE, ILLINOIS 60012

PARCEL # 13-25-300-021

OWNER:
MCHENRY COUNTY COLLEGE
8900 U.S. HIGHWAY 14
CRYSTAL LAKE, ILLINOIS 60012

ENGINEER:
HR GREEN INC.,
1391 CORPORATE DRIVE, SUITE 203
McHENRY, IL 60050
PHONE: (815) 385-1778

JOE VAVRINA, PE, REGIONAL DIRECTOR
PHONE: (815) 759-8363

SURVEYOR:
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1391 CORPORATE DRIVE, SUITE 203
McHENRY, IL 60050
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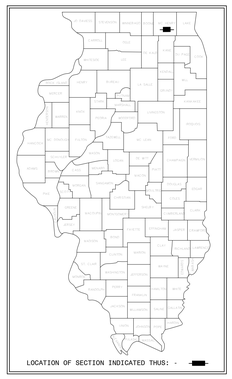
JOHN BOLINE, P.L.S. – PROJECT SURVEYOR
PHONE: (815) 759-8375

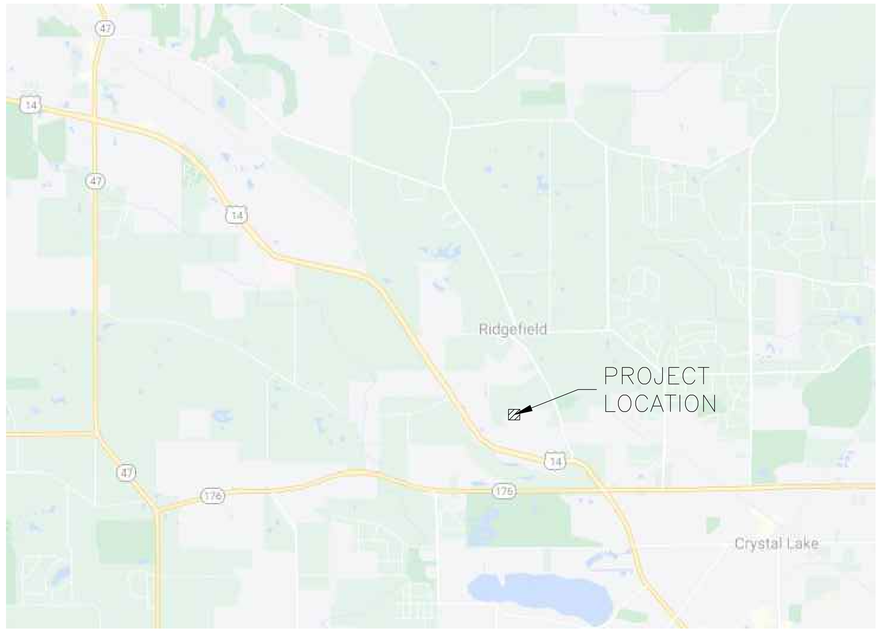


LOCATION OF SECTION INDICATED THUS: -■-

NOTE:

- HR GREEN, INC. IS TO BE NOTIFIED 3 DAYS PRIOR TO CONSTRUCTION START.
- HR GREEN, INC. SHALL BE INCLUDED IN ALL PRE-CONSTRUCTION MEETINGS.
- ANY KNOWN DISCREPANCIES ON THIS PLAN SET MUST BE BROUGHT TO THE ATTENTION OF HR GREEN, INC. PRIOR TO THE START OF CONSTRUCTION.

LOCATION MAP



NORTH
(N.T.S.)

SHEET INDEX

SITE BENCHMARK NOTES:

- SOURCE BENCHMARK: BENCHMARK #4" PER AS SHOWN ON THE PLANS FOR "MCHENRY COUNTY COLLEGE NEW SCIENCE CENTER " DATED AUGUST 11, 2017, BEING A CUT SQUARE ON NORTH FACE OF LIGHT POLE BASE LOCATED IN THE MIDDLE CURB ISLAND LOCATED EAST OF PARKING LOT D, NORTH OF THE RING ROAD AND SOUTH OF BUILDING D.
  - ELEV = 921.24 (NAVD 88)
- SITE BENCHMARK (BM#1): NORTHWEST ARROW BOLT ON THE FIRE HYDRANT LOCATED APPROXIMATELY 90 FEET WESTERLY OF THE ENTRANCE TO BUILDING E.
  - ELEV = 921.49 (NAVD 88)
- SITE BENCHMARK (BM#2): NORTHEAST ARROW BOLT ON THE FIRE HYDRANT LOCATED APPROXIMATELY 70 FEET NORTHEASTERLY OF THE ENTRANCE TO BUILDING B.
  - ELEV = 919.44 (NAVD 88)
- HR GREEN, INC. CONTROL DISCLAIMER: THE ATTACHED BENCHMARKS ARE FOR CONSTRUCTION PURPOSES ONLY. BY USING THE DATA PROVIDED HEREON, USERS ARE RESPONSIBLE FOR VERIFYING THE ACTUAL HORIZONTAL AND VERTICAL LOCATIONS OF PROPOSED IMPROVEMENTS BASED ON THE EXISTING EXTERIOR PROPERTY CORNERS AND SITE BENCHMARKS. HR GREEN, INC. ASSUMES NO RESPONSIBILITY FOR THE IMPROPER USE OF THE INFORMATION HEREIN PROVIDED.

Dial 811 or 1-800-892-0123
811
Know what's below. Call before you dig.

CALL JULIE 1-800-892-0123
WITH THE FOLLOWING:
COUNTY McHenry
CITY-TOWNSHIP Crystal Lake – Dorr
SEC. & 1/4 SEC. NO.# SW 1/4 OF SEC-25-T-44N-7E

48 hours before you dig
(Excluding Sat., Sun. & Holidays)

CERTIFICATION

JOSEPH F. VAVRINA 062-058926 LICENSED PROFESSIONAL ENGINEER STATE OF ILLINOIS

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Illinois.

04/21/2026
JOSEPH F. VAVRINA, P.E. DATE
License Number: 062-058926
My license renewal date is December 31, 2027.
Pages or sheets covered by this seal:
ALL C SHEETS

HRGreen

1391 CORPORATE DRIVE, SUITE 203 | McHENRY, ILLINOIS 60050
Phone: 815.385.1778 | Toll Free: 800.728.7805 | Fax: 815.385.1781 | HRGreen.com

ISSUED FOR BID – NOT FOR CONSTRUCTION

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COVER SHEET

SHEET NUMBER:
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SPECIFICATIONS & GENERAL NOTES

All items of this project shall be governed by specifications included in the documents listed below:

A. "Standard Specifications for Road and Bridge Construction" prepared by the Department of Transportation of the State of Illinois and adopted by said department (latest revision).

B. "Supplemental Specifications and Recurring Special Provisions" adopted by the Illinois Department of Transportation (latest revision date).

C. "Standards and Specifications for Soil Erosion and Sediment Control" (latest revision).

D. "Standard Specifications for Water and Sewer Main Construction in Illinois" (latest revision).

In addition the following special provisions supplement the said specifications, and in case of conflict with any part or parts of said specifications, these special provisions shall take precedence and shall govern.

1. SCOPE OF WORK. The proposed improvement consists of supplying all the necessary labor, material and equipment to satisfactorily construct and install all improvements according to the plans designated as "McHENRY COUNTY COLLEGE FIRE TOWER."

2. CONSTRUCTION OF UNDERGROUND UTILITIES

A. Excavation: Where working conditions and right-of-way permit, pipe line trenches with sloping sides may be used.

The slopes shall not extend below the top of the pipe, and trench excavations below this point shall be made with vertical sides with widths not exceeding those specified herein for the various sizes of pipe.

Open-cut trenches shall be sheeted and braced as required by the governing State and Federal laws and municipal ordinances, and as may be necessary to protect life, property, or the work.

Where firm foundation is not encountered at the grade established due to unsuitable soil, all such unsuitable material shall be removed and replaced with approved compacted granular material.

B. Width of trench: See trench detail.

C. Removal of water: Contractors shall, at all times during construction, provide and maintain ample means and devices with which to remove and properly dispose of all water entering the excavations. No sanitary sewer shall be used for disposal of trench water, unless specifically approved by the Engineer and then only if the trench water does not ultimately arrive at existing pumping or sewage treatment facilities.

D. Bedding of pipe: All pipe shall be installed on a bed of approved, compacted granular material unless otherwise approved by the City Engineer. The bedding and backfilling of excavated materials shall be cleared with City first and be installed as per typical trench backfill detail.

E. Special backfill: Whenever the excavation is in existing or proposed street, parking areas, driveways, or other paved areas, the trench shall be backfilled with approved selected granular material, compacted in place. The top 12" of the backfill shall be filled with road gravel or crushed stone and maintained as a temporary surface for the normal use of the area. Special backfill shall meet the requirements of the City of Crystal Lake standard detail UG-03. Note: Excavated materials may be used if approved by the City Engineer.

F. Restoration of drainage: As soon as possible after backfilling the trench, all ditching, grading and shaping necessary to restore the original drainage in the area of work shall be performed. Culverts removed during the course of the work shall be replaced as soon as practicable.

Adequate temporary drainage facilities shall be provided during construction.

G. Utilities: The Contractor shall notify all utilities prior to the installation of any pipe lines. Where conflict exists between underground utilities and the proposed underground piping requiring a revision to the plans, such construction shall not be undertaken until such changes are approved by the City Engineer in writing.

3. The subgrade shall be free of unsuitable material and shall be prepared in accordance with the recommendations noted in the geotechnical report prepared by Midland Standard, dated February 9, 2026 for this project. Testing for compaction shall be the responsibility of the contractor. The City of Crystal Lake will require a proof-roll test if warranted by final soil compaction. This also applies to the parking lot and aisle subgrade and also upon gravel placement. All topsoil and any organic materials must be removed.

4. Easements for the existing utilities, both public and private, and utilities within public rights-of-way are shown on the plans according to available records. The Contractor shall be responsible for determining the exact location in the field of these utility lines and their protection from damage due to construction operations. If existing utility lines of any nature are encountered which conflict in location with new construction, the Contractor shall notify the Engineer so that the conflict may be resolved.

5. Contractor shall be responsible for securing all Permits including municipal permits.

6. INSPECTION. All improvements shall be subject to inspection by a duly authorized and qualified City inspector both during the course of construction and after construction is complete. The inspector shall have authority over materials of construction, methods of construction and workmanship to insure compliance with working drawings and specifications. The Contractor shall provide for reasonable tests and proof of quality of materials as requested by the inspector. Inspector shall have forty-eight (48) hours notice prior to construction.

7. Wherever a sewer crosses under a water main, the minimum vertical distance from the top of the sewer to the bottom of the water main shall be 18". Furthermore, a minimum horizontal distance of 10' between sanitary sewers and water mains shall be maintained. If either the vertical or horizontal distances described above cannot be maintained, or the sewer crosses above the water main, the sewer pipe shall be pipe of water main type quality and water main quality joints, or the water main shall be encased in a steel sleeve for a perpendicular distance of 10' on each side of the sewer.

8. PROTECTION OF WATER MAIN AND WATER SERVICE LINES. Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows;

A. Water Service Lines

1. Horizontal Separation

a. Water mains shall be laid at least 10' horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.

b. Water mains may be laid closer than 10' to a sewer line when:

(1) Local conditions present a lateral separation of 10';

(2) The water main invert is at least 18" above the crown of the sewer; and

(3) The water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer with a minimum vertical separation of 18".

c. Both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, or PVC pipe meeting the requirements of Section 653.111 when it is impossible to meet (a) or (b) above. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling.

2. Vertical Separation.

a. A water main shall be laid so that its invert is 18" above the crown of the drain or sewer whenever water mains cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main located within 10' horizontaly of any sewer or drain crossed. A length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer or drain.

b. Both the water main and sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, or PVC pipe meeting requirements of Section 653.111 when:

(1) It is impossible to obtain the proper vertical separation as described in (a) above; and

(2) The water main passes under a sewer or drain.

c. A vertical separation of 18" between the invert of the sewer or drain and the crown of the water main shall be maintained where a water main crosses under a sewer. Support the sewer or drain lines to prevent settling and breaking the water main.

d. Construction shall extend on each side of the crossing until the normal distance from the water main to the sewer or drain line is at least 10'.

B. Special Conditions. Alternate solutions shall be presented to the Agency when extreme topographical, geological or existing structural conditions make strict compliance with (A) and (B) above technically and economically impractical. Alternate solutions will be approved provided water-tight construction structurally equivalent to approved water main material is proposed.

9. The Contractor may not remove any material from the site except as directed by the Owner or Engineer in the case of excess material.

10. TOPSOIL PLACEMENT. All non-paved disturbed areas shall be restored w/ 6" topsoil and Class 1A Seed with excelsior blanket.

11. The Engineer and City of Crystal Lake Engineering Department shall be notified if, during construction, any buried field tiles are exposed or disturbed. The Contractor shall reconnect said field tiles if deemed necessary.

12. Contractor shall provide insurance coverage as per Article 107.27 of the Standard Specifications. The "Department" shall be taken to mean HR Green, Inc. The policy of insurance shall include HR Green, Inc., the City of Crystal Lake and it's Agents as an additional insured or provide separate coverage with an Owner's Protective Policy, as per the amounts stated in the Standard Specifications. No work shall begin until the certificate of insurance is on file with the Engineer. All costs for insurance shall be considered incidental to the contract.

13. All handicapped parking signs must have a $250.00 fine sign attached.

14. Lighting shall be constructed as per the electrical plan, done under separate contract by Electrical Consultant. All conduit shall be placed outside of any municipal easements except for authorized 90° crossings.

15. The Contractor shall be responsible for the installation and maintenance of adequate signs, traffic control devices, and warning devices to inform and protect the public during all phases of construction. See City Standard Traffic Control detail for lane closures of public roads.

16. The Engineer shall be responsible for the following:

A. To visit the construction site in order to better carry out the duties and responsibilities assigned by the Owner and undertaken by the Engineer; and

B. The Engineer shall not, during such visits or as a result of such observations of the Contractor's work in progress, supervise, direct, have control over the Contractor's work, nor shall the Engineer have the authority over the responsibility for the means, methods, techniques, sequences, or procedures of construction selected by the Contractor, for safety precautions and programs incidental to the work of the Contractor, or for any failure of the Contractor to comply with laws, rules, regulations, ordinances, codes or orders applicable to the Contractor furnishing and performing his work. Accordingly, the Engineer can neither guarantee the performance of the construction contracts by the Contractor nor assume responsibility for the Contractor's failure to furnish and perform his work in accordance with the Contract Documents.

17. No construction plans shall be used for construction unless specifically marked "For Construction." Prior to commencement of construction, the Contractor shall verify all dimensions and conditions affecting their work with the actual conditions at the job site. In addition, the Contractor must verify the Engineer's line and grade stakes. If there are any discrepancies from what is shown on the construction plans, he must immediately report same to the Engineer before doing any work, otherwise the Contractor assumes full responsibility. In the event of disagreement between the construction plans, standard specifications and/or special details, the Contractor shall secure written instructions from the Engineer prior to proceeding with any part of the work affected by omissions or discrepancies. Failing to secure such instructions, the Contractor will be considered to have proceeded at his own risk and expense.

In the event of any doubt or question arising with respect to the true meaning of the construction plans or specifications, the decision of the Engineer shall be final and conclusive.

18. The Contractor shall indemnify and hold harmless the City ,City's Engineers their agents and it's employees, HR Green, Inc. and McHenry County College, from and against all claims, damages, losses and expenses, including attorney's fees arising out of or resulting from the performance of the Contractor's work. In any and all claims against the City or its employees, by any employee of the Contractor, or anyone directly or indirectly employed by the Contractor, or anyone for whose acts the Contractor may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount of damages, waiver of subrogation compensation or benefits payable by or for the Contractor under Workmen's Compensation acts, disability benefit acts or other employee benefit acts.

19. Sawing of removal items as noted on the plans, specified in Section 440 of the Standard Specifications, or as required by the engineer, shall be considered incidental to the cost of the item being removed, and no extra compensation will be allowed, unless otherwise specified.

20. PROTECTIVE COAT. This work shall be in accordance with Section 420 of the Standard Specifications insofar as applicable with the following revision.

The protective coat shall be applied to all exposed surfaces of Combination Concrete Curb and Gutter, Concrete Median and Concrete Corrugated Median.

This work will be paid for at the contract unit price per square yard for Protective Coat.

21. A performance guarantee shall be required (letter of credit) for all public utilities. Also, a two year maintenance bond shall be established upon completion of work.

22. All pavement markings on main access drives, approaches and parking lot shall be painted with two (2) coats of WHITE SHERWIN WILLIAMS "PROMAR TRAFFIC MARKING."

Pavement Striping: All proposed pavement striping to be painted.

All Handicap striping shall be yellow.

23. CONCRETE PAVEMENT. The contractor will need to provide a grid spacing layout for approval by the engineer.

The curing requirements should follow Section 1022.01, (b) with fugitive dye as noted in the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition. Sealers should follow Section 1026 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.

Joint sealing shall follow Section 1058 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.

24. The concrete sealer, in addition to conforming with the referenced Standard Specification section, shall be selected from the current IDOT approved product list for Plural Component Concrete Sealers, or equal. The concrete sealer must dry to a clear finish. All exterior concrete surfaces shall be sealed. The contractor shall provide documentation from the sealant provider, segmental block wall supplier and concrete pavement supplier noting the sealer is compatible with all exterior concrete surfaces that it is to be applied to. Contractor to also provide cut sheets of the desired sealer to the engineer for approval prior to ordering.

25. All surplus soil that will need to be hauled and disposed of offsite will need to be certified that it is not contaminated as defined under 415 ILCS 5/3.160 and any fees, taxes, surcharges charged by or through the operator(s) of clean construction or demolition debris (CCDD) or uncontaminated soil fill operations for the acceptance of uncontaminated soil shall be paid for by the contractor and those fees included in their bid price.

SYMBOL LEGEND

	EXISTING	PROPOSED
SANITARY MANHOLE	◎	◉
STORM MANHOLE	◎	◉
STORM CATCH BASIN/INLET	○	●
INLET	▭	▬
FLARED END SECTION	▷	▶
DRY WELL	◍	◉
VALVE VAULT	⊗	◉
FIRE HYDRANT	▾	▾
LIGHT POLE	✳	✳
STREET SIGN	┼	
REGULATORY SIGN	⊸	⊸
UTILITY POLE	○	
UTILITY BOX	▯ ▯ ▯ ▯	
MAILBOX	▯	
WELL	◎	
STORM SEWER	——○——	——▶——
SANITARY SEWER	——○——	——○——
CULVERT	▭▭▭▭▭▭	▭▭▭▭▭▭
WATER MAIN	——#——	——#——
WATER MAIN ENCASEMENT		▨▨▨▨
SANITARY FORCE MAIN	——F——	——F——
STORM UNDERDRAIN	——D——	——D——
ELECTRIC LINE	——E——	
TELEPHONE LINE	——T——	
GAS LINE	——G——	
CABLE TV LINE	——C——	
TREE LINE	☁	
TREE	✳	
CONTOURS	———	———
FENCE	——×——	
STONE RIP RAP		▨
EROSION CONTROL FENCE (QUANTITY SPECIFIED PER PLANS)		●—●—●
DRAINAGE DIRECTION ARROW		⟋
10-100 YEAR OVERFLOW DIRECTION ARROW		➡

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ELECTRICAL ENGINEER:
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1216 TOWER ROAD,
SCHAUMBURG, IL 60173
P: 847.882.2010

McHenry County College

Fire Tower Replacement

8900 Northwest Hwy #14, Crystal Lake, IL 60012
DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

GENERAL NOTES, SPECFIFICATIONS & LEGEND

SHEET NUMBER:

C-01

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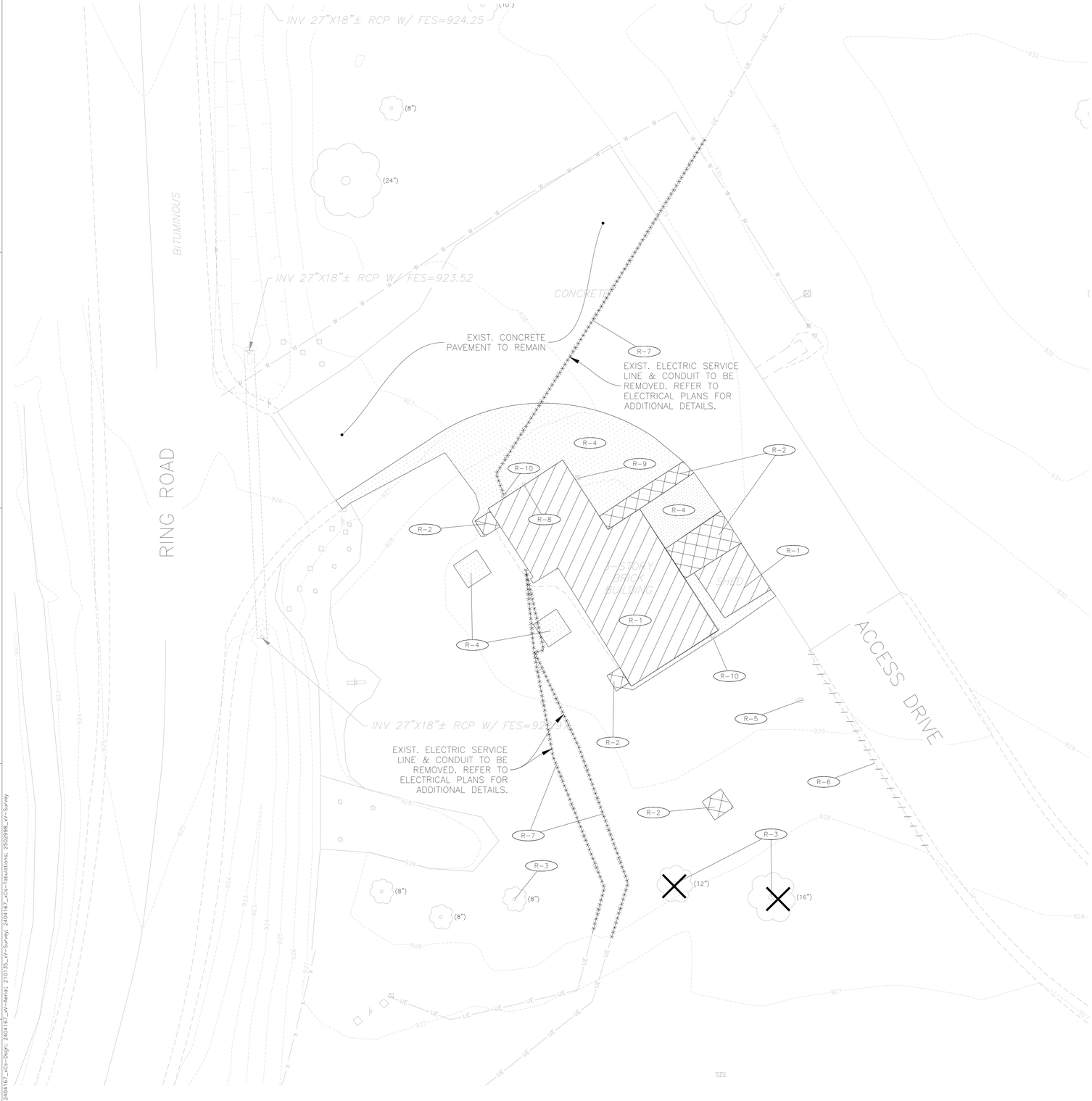

PROJECT NOTES:

- LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES, IN ADDITION TO, NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED. SEE SHEETS C-06 THRU C-08 FOR EROSION CONTROL MEASURES)
- ALL EXISTING UTILITIES TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL UTILITY COMPANIES INVOLVED IN PROJECT AND PAY ALL REQUIRED FEES AND COSTS.
- ALL STRUCTURES & DEBRIS SHALL BE REMOVED PRIOR TO CONSTRUCTION & DISPOSED OF OFFSITE.
- ANY EXISTING FIELD DRAIN TILES ENCOUNTERED SHALL BE RECONNECTED OR CONNECTED TO THE NEAREST STORM SEWER.
- ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- CONTRACTOR TO KEEP RING ROAD (CIRCLE DR.) OPEN AT ALL TIMES.
- THE CONTRACTOR IS CAUTIONED NEITHER TO OBSTRUCT NOR REMOVE ANY EXISTING PAVEMENT, NOR TO DISTURB THE EXISTING TRAFFIC PATTERNS MORE THAN IS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.

STAGING NOTE:

(STAGING SUBJECT TO CHANGES PER SITE CONTRACTORS SCHEDULE AND METHODS OF OPERATION)

1. EROSION CONTROL MEASURES
2. PLAN REMOVALS
3. GRADING
4. BUILDING CONSTRUCTION
5. PAVING
6. TOPSOIL RESPREAD/SEED

LEGEND

- INDICATES BUILDING/FOUNDATION REMOVAL
- INDICATES CONCRETE REMOVAL (FULL DEPTH) (SEE TAGS FOR INFORMATION)
- INDICATES LANDSCAPE/ROCK MULCH REMOVAL
- (R-#) INDICATES MISC. REMOVAL ITEMS
- INDICATES EXIST. CONCRETE CURB & GUTTER OR WALL TO BE REMOVED
- INDICATES TREE AND BRUSH REMOVAL (SEE LANDSCAPE PLANS)
- INDICATES TREE AND BRUSH PROTECTION
- INDICATES PAVEMENT SAWCUT
- INDICATES UTILITY LINE REMOVAL

NOTES:

- MCHENRY COUNTY COLLEGE (MCC) SHALL BE NOTIFIED OF ALL NON IDENTIFIED UNDERGROUND UTILITIES OR CONDUITS DISCOVERED DURING CONSTRUCTION. IF ANY OF THE UTILITY OR CONDUITS NEED TO BE REPAIRED, PLUGGED, REROUTED AND OR ABANDONED IN PLACE, IT SHALL TAKE PLACE PER THE DIRECTION OF THE MCC.
- ALL NON-PAVED DISTURBED AREAS SHALL BE RESTORED W/ 6" TOPSOIL AND CL 1A SEED W/ EXCELSIOR BLANKET

REMOVAL NOTES:

- ALL REMOVALS IN NON-PAVED AREAS DENOTED TO REQUIRE CLEARING AND GRUBBING SHALL INCLUDE TOPSOIL STRIP AND STOCKPILE AS PART OF THE REMOVAL UNLESS OTHERWISE NOTED.

(R-#) REMOVAL TAGS:

NUMBER	DESCRIPTION	REMARKS
R-1	BUILDING	REMOVE (FULL DEPTH)
R-2	CONCRETE PAVEMENT/SIDEWALK	REMOVE (FULL DEPTH)
R-3	TREE	REMOVE
R-4	ROCK MULCH	REMOVE
R-5	LIGHT POLE	REMOVE
R-6	SHOULDER/CURB	REMOVE
R-7	ELECTRIC SERVICE	REMOVE / RELOCATE
R-8	WATER METER	REMOVE
R-9	GAS METER	REMOVE
R-10	ELECTRIC METER	REMOVE

Dial 811 or 1-800-892-0123

811 Know what's below. Call before you dig.

CALL JULIE 1-800-892-0123

WITH THE FOLLOWING:
COUNTY McHenry
CITY-TOWNSHIP Crystal Lake - Dorr
SEC. & 1/4 SEC. NO.# SW 1/4 OF SEC-25-T-44N-7E

48 hours before you dig
(Excluding Sat., Sun. & Holidays)

4/20/2026 3:50:14 PM
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Xrefs: MCC Fire Tower_DKA-TITLEBLOCK; 180186_xV-Survey; 2404167_xCs-Dsgn; 2404167_xV-Aerial; 210135_xV-Survey; 2404167_xCs-Tabulations; 2502998_xV-Survey

NORTH

0 5 10

BAR IS ONE INCH ON OFFICIAL DRAWINGS
0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY

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McHenry County College

Fire Tower Replacement

8900 Northwest Hwy #14, Crystal Lake, IL 60012
DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
SITE DEMOLITION PLAN

SHEET NUMBER:
C-02

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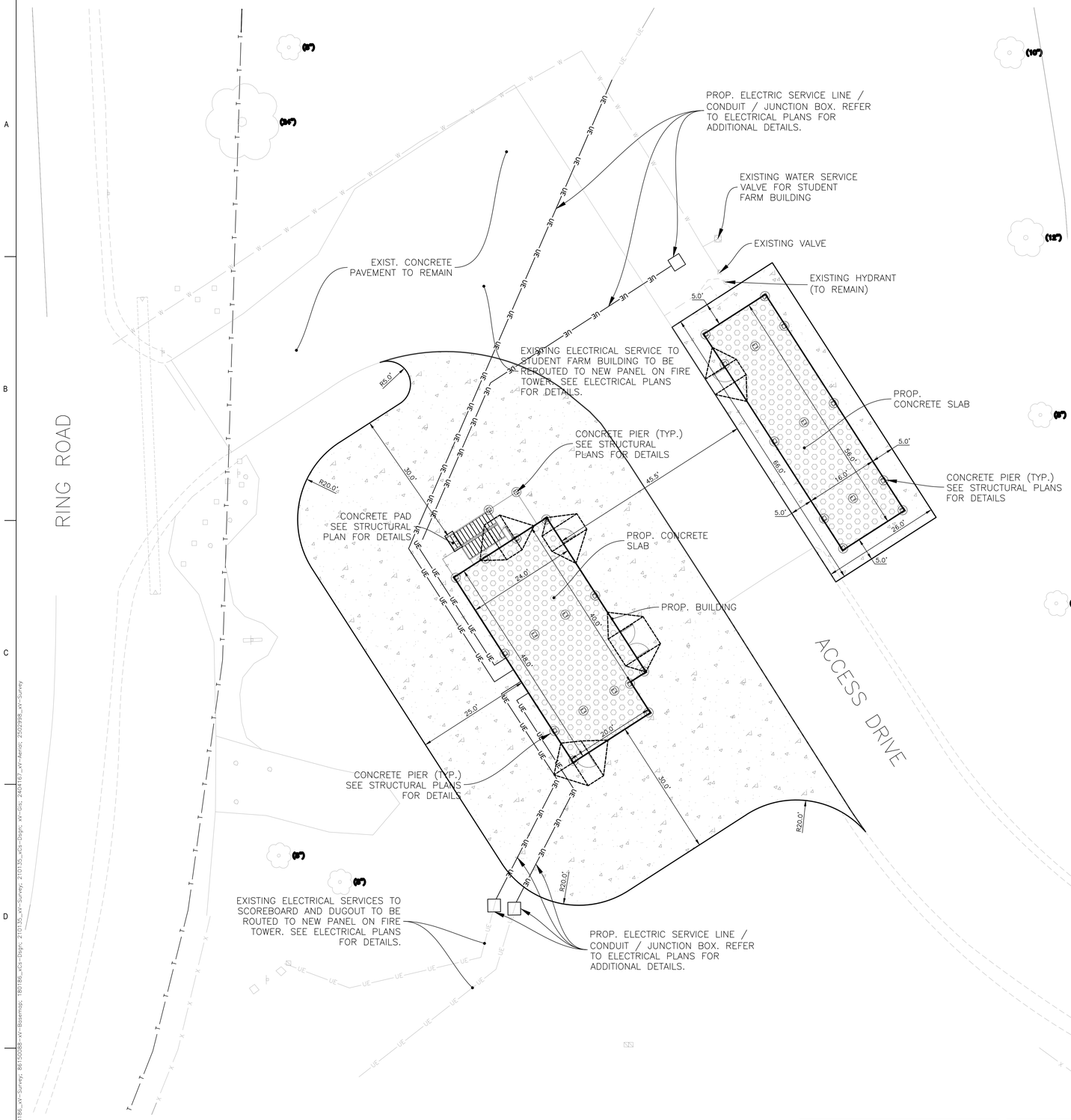

PROJECT NOTES:

- **LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES, IN ADDITION TO, NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED. SEE SHEET C-06 & C-08 FOR EROSION CONTROL MEASURES)**
- ALL EXISTING UTILITIES TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL UTILITY COMPANIES INVOLVED IN PROJECT AND PAY ALL REQUIRED FEES AND COSTS.
- ALL STRUCTURES & DEBRIS SHALL BE REMOVED PRIOR TO CONSTRUCTION & DISPOSED OF OFFSITE.
- ANY EXISTING FIELD DRAIN TILES ENCOUNTERED SHALL BE RECONNECTED OR CONNECTED TO THE NEAREST STORM SEWER.
- ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- **CONTRACTOR TO KEEP RING ROAD (CIRCLE DR.) OPEN AT ALL TIMES.**
- THE CONTRACTOR IS CAUTIONED NEITHER TO OBSTRUCT NOR REMOVE ANY EXISTING PAVEMENT, NOR TO DISTURB THE EXISTING TRAFFIC PATTERNS MORE THAN IS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.

NOTES:

- MCHENRY COUNTY COLLEGE (MCC) SHALL BE NOTIFIED OF ALL NON IDENTIFIED UNDERGROUND UTILITIES OR CONDUITS DISCOVERED DURING CONSTRUCTION. IF ANY OF THE UTILITY OR CONDUITS NEED TO BE REPAIRED, PLUGGED, REROUTED AND OR ABANDONED IN PLACE, IT SHALL TAKE PLACE PER THE DIRECTION OF THE MCC.
- ALL NON-PAVED DISTURBED AREAS SHALL BE RESTORED W/ 6" TOPSOIL AND CL 1A SEED W/ EXCELSIOR BLANKET

REMOVAL NOTES:

- ALL REMOVALS IN NON-PAVED AREAS DENOTED TO REQUIRE CLEARING AND GRUBBING SHALL INCLUDE TOPSOIL STRIP AND STOCKPILE AS PART OF THE REMOVAL UNLESS OTHERWISE NOTED.

SITE DATA:

- PIN: 13-25-300-021
- PROPOSED LIMITS OF DISTURBANCE AREA: 21,717± SQ. FT. (0.50 ACRES)
- EXISTING IMPERVIOUS WITHIN LIMITS OF DISTURBANCE AREA: 2,861± SQ. FT. (12.84%)
- PROPOSED IMPERVIOUS WITHIN LIMITS OF DISTURBANCE AREA: 11,455± SQ. FT. (52.75%)
- NET CHANGE IN IMPERVIOUS AREA: 8,594± SQ. FT. INCREASE

BUILDING AREA:

- PROPOSED BUILDING TO BE CONSTRUCTED PER ARCHITECTURAL PLANS.

PARKING DATA:

- NO PROPOSED CHANGES TO EXISTING PARKING.

BID ALTERNATE NO. 3:

- DEDUCT FROM THE LUMP SUM BASE BID TO PROVIDE A CA-6 TEMPORARY ACCESS DRIVE IN LIEU OF THE CONCRETE DRIVE CONNECTING THE RADIO TOWER PARKING LOT TO THE STORAGE BUILDING ACCESS ROAD.

Dial 811 or 1-800-892-0123
Know what's below. Call before you dig.

CALL JULIE 1-800-892-0123

WITH THE FOLLOWING:
COUNTY McHenry
CITY-TOWNSHIP Crystal Lake - Dorr
SEC. & 1/4 SEC. NO.# SW 1/4 OF SEC-25-T-44N-7E

48 hours before you dig
(Excluding Sat., Sun. & Holidays)

PROJECT NOTES:

- CONTRACTOR TO COORDINATE W/ COLLEGE PRIOR TO CLOSING ANY PORTIONS OF THE EXISTING ACCESS DRIVE.
- ALL CONSTRUCTION FOR UTILITIES AND PAVEMENT SHOULD BE DONE IN ACCORDANCE WITH CITY OF CRYSTAL LAKE STANDARD SPECIFICATIONS.
- ALL PAVEMENT DIMENSIONS ARE MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- ALL PAVEMENT RADII ARE 5.0' RADIUS MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- ALL CURB ADJOINING SIDEWALKS SHALL BE DOWELED INTO THE CURB.

LEGEND

- DENOTES PAVEMENT SAWCUT
- DENOTES CONCRETE PAVEMENT
- DENOTES PROP. SIDEWALK
- DENOTES CONCRETE PAVEMENT (ACCESS DRIVE)
- DENOTES CONCRETE SLAB

STANDARD CONCRETE PAVEMENT SECTION

8" CONCRETE PAVEMENT
6 X 6 W10 X W10 W.W.F.
6" MIN. AGGREGATE BASE, (CA-6, 100 % CRUSHED)

TYPICAL ALL EXTERIOR CONCRETE:
- *CLASS PV CONCRETE*
- *4000# CONCRETE*
- *CONTROL JOINTS PER CONTRACTOR LAYOUT (SEE SPECIFICATIONS FOR ADDITIONAL CRITERIA)*

(SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION)

CONCRETE SLAB SECTION

4" CONCRETE PAVEMENT
4" MIN. AGGREGATE BASE, (CA-6, 100 % CRUSHED)

TYPICAL ALL EXTERIOR CONCRETE:
- *CLASS PV CONCRETE*
- *4000# CONCRETE*
- *CONTROL JOINTS PER CONTRACTOR LAYOUT (SEE SPECIFICATIONS FOR ADDITIONAL CRITERIA)*

(SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION)

STANDARD CONCRETE PAVEMENT SECTION (ACCESS DRIVE)

5" CONCRETE PAVEMENT
6 X 6 W10 X W10 W.W.F.
4" MIN. AGGREGATE BASE, (CA-6, 100 % CRUSHED)

TYPICAL ALL EXTERIOR CONCRETE:
- *CLASS PV CONCRETE*
- *4000# CONCRETE*
- *CONTROL JOINTS PER CONTRACTOR LAYOUT (SEE SPECIFICATIONS FOR ADDITIONAL CRITERIA)*

(SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION)

NORTH
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BAR IS ONE INCH ON OFFICIAL DRAWINGS
0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY

ISSUED FOR BID – NOT FOR CONSTRUCTION

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Xrefs: MCC Fire Tower_DWA-TITLEBLOCK; 2404167_XCs-Dsgn; 180186_XV-Survey; 8615008R-XV-Basemap; 180186_XCs-Dsgn; 210135_XV-Survey; 210135_XCs-Dsgn; XV-Gis; 2404167_XV-Aerial; 2502998_XV-Survey

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ELECTRICAL ENGINEER:
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1216 TOWER ROAD,
SCHAUMBURG, IL 60173
P: 847.882.2010

McHenry County College

Fire Tower Replacement

8900 Northwest Hwy #14, Crystal Lake, IL 60012
DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
SITE & UTILITY PLAN

SHEET NUMBER:
C-03

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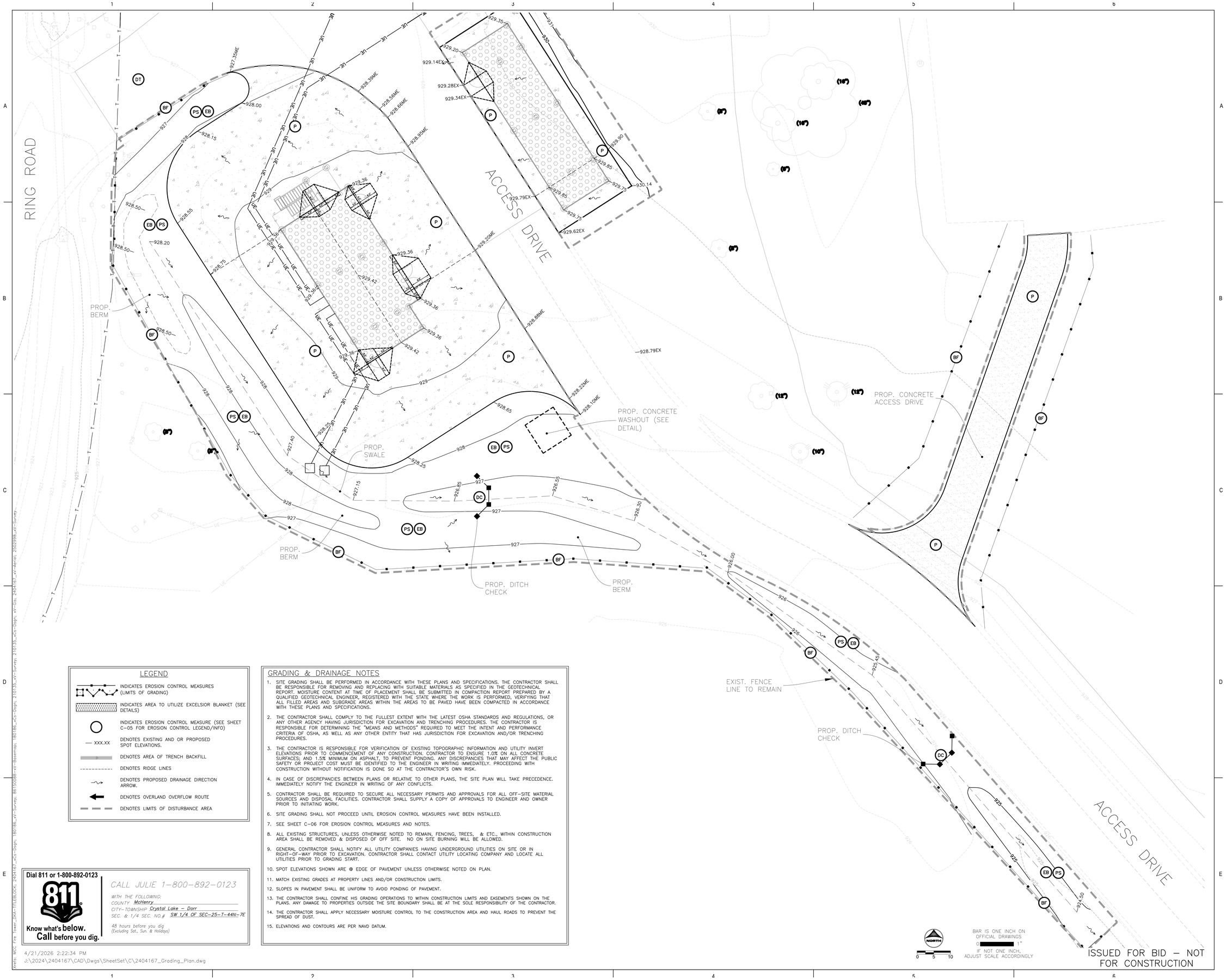

LEGEND

- INDICATES EROSION CONTROL MEASURES (LIMITS OF GRADING)
- INDICATES AREA TO UTILIZE EXCELSIOR BLANKET (SEE DETAILS)
- INDICATES EROSION CONTROL MEASURE (SEE SHEET C-05 FOR EROSION CONTROL LEGEND/INFO)
- XXX.XX — DENOTES EXISTING AND OR PROPOSED SPOT ELEVATIONS.
- DENOTES AREA OF TRENCH BACKFILL
- DENOTES RIDGE LINES
- DENOTES PROPOSED DRAINAGE DIRECTION ARROW.
- DENOTES OVERLAND OVERFLOW ROUTE
- DENOTES LIMITS OF DISTURBANCE AREA

GRADING & DRAINAGE NOTES

1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL BE SUBMITTED IN COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
3. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 1.0% ON ALL CONCRETE SURFACES; AND 1.5% MINIMUM ON ASPHALT, TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITHOUT NOTIFICATION IS DONE SO AT THE CONTRACTOR'S OWN RISK.
4. IN CASE OF DISCREPANCIES BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE. IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS.
5. CONTRACTOR SHALL BE REQUIRED TO SECURE ALL NECESSARY PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. CONTRACTOR SHALL SUPPLY A COPY OF APPROVALS TO ENGINEER AND OWNER PRIOR TO INITIATING WORK.
6. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
7. SEE SHEET C-06 FOR EROSION CONTROL MEASURES AND NOTES.
8. ALL EXISTING STRUCTURES, UNLESS OTHERWISE NOTED TO REMAIN, FENCING, TREES, & ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED & DISPOSED OF OFF SITE. NO ON SITE BURNING WILL BE ALLOWED.
9. GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
10. SPOT ELEVATIONS SHOWN ARE @ EDGE OF PAVEMENT UNLESS OTHERWISE NOTED ON PLAN.
11. MATCH EXISTING GRADES AT PROPERTY LINES AND/OR CONSTRUCTION LIMITS.
12. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING OF PAVEMENT.
13. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
14. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
15. ELEVATIONS AND CONTOURS ARE PER NAVD DATUM.

Dial 811 or 1-800-892-0123

Know what's below. Call before you dig.

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SEC. & 1/4 SEC. NO.# SW 1/4 OF SEC-25-T-44N-7E

48 hours before you dig
(Excluding Sat, Sun. & Holidays)

NORTH
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BAR IS ONE INCH ON OFFICIAL DRAWINGS
0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY

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Xrefs: MCC Fire Tower_DKA-TITLEBLOCK 2404167_xCs-Dsgn; 180186_xV-Survey; 86150088-xV-Baseshop; 180186_xCs-Dsgn; 210135_xV-Survey; 210135_xCs-Dsgn; xV-Civil; 2404167_xV-4erloc 2502998_xV-Survey;

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8900 Northwest Hwy #14, Crystal Lake, IL 60012
DKA PROJECT NO: 25-028

KEY PLAN:

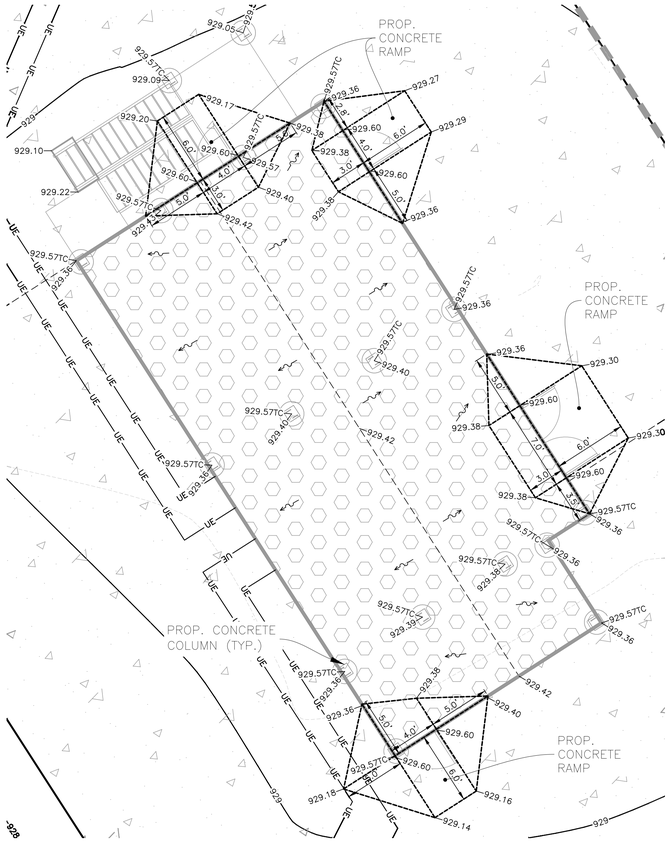
SHEET STATUS: 04/21/2026
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
GRADING & EROSION CONTROL PLAN

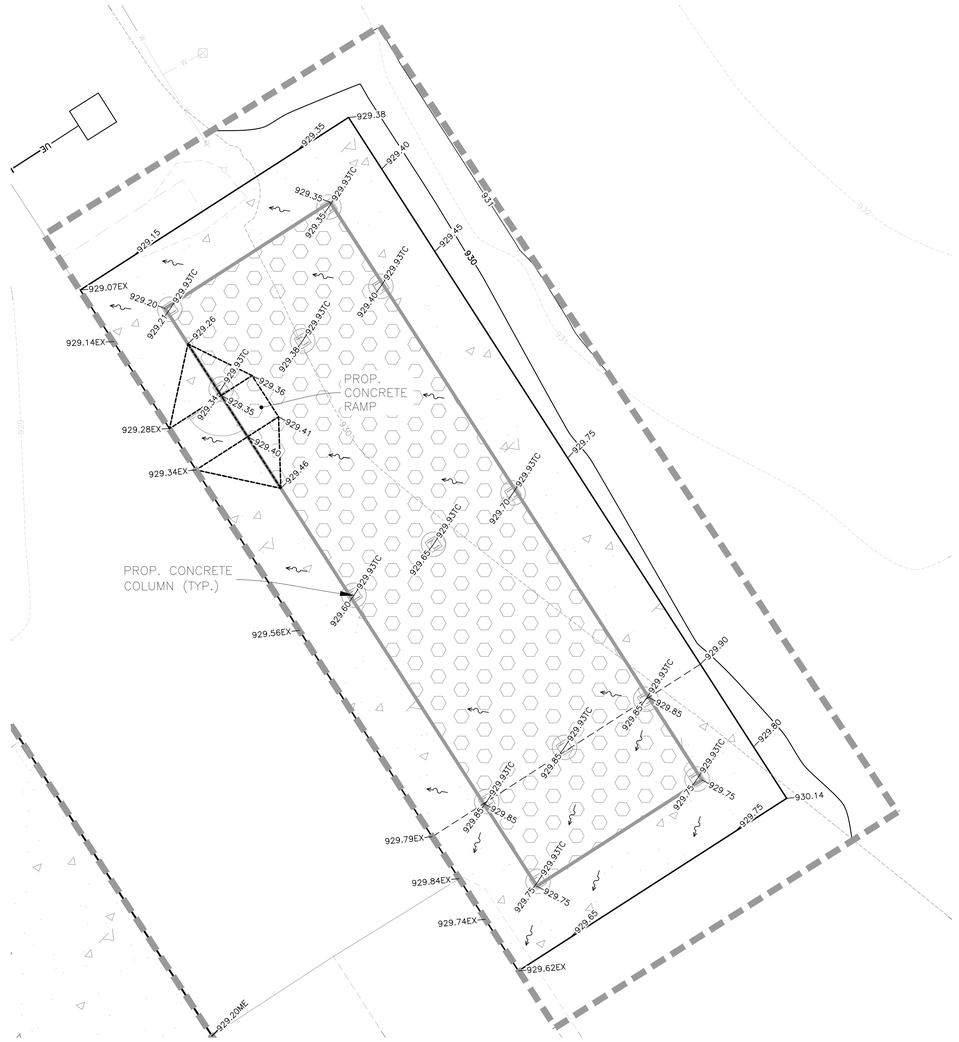
SHEET NUMBER:
C-04

2/26/2026 11:41:24 AM



1 FIRE TOWER CONCRETE SLAB & COLUMN GRADING DETAIL

SCALE: 1" = 5'



2 SCBA BUILDING CONCRETE SLAB & COLUMN GRADING DETAIL

SCALE: 1" = 5'

LEGEND

- INDICATES EROSION CONTROL MEASURES (LIMITS OF GRADING)
- INDICATES AREA TO UTILIZE EXCELSIOR BLANKET (SEE DETAILS)
- INDICATES EROSION CONTROL MEASURE (SEE SHEET C-05 FOR EROSION CONTROL LEGEND/INFO)
- XXX.XX — DENOTES EXISTING AND OR PROPOSED SPOT ELEVATIONS.
- DENOTES AREA OF TRENCH BACKFILL
- DENOTES RIDGE LINES
- DENOTES PROPOSED DRAINAGE DIRECTION ARROW.
- DENOTES OVERLAND OVERFLOW ROUTE
- DENOTES LIMITS OF DISTURBANCE AREA

GRADING & DRAINAGE NOTES

1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL BE SUBMITTED IN COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
3. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 1.0% ON ALL CONCRETE SURFACES; AND 1.5% MINIMUM ON ASPHALT, TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITHOUT NOTIFICATION IS DONE SO AT THE CONTRACTOR'S OWN RISK.
4. IN CASE OF DISCREPANCIES BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE. IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS.
5. CONTRACTOR SHALL BE REQUIRED TO SECURE ALL NECESSARY PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. CONTRACTOR SHALL SUPPLY A COPY OF APPROVALS TO ENGINEER AND OWNER PRIOR TO INITIATING WORK.
6. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
7. SEE SHEET C-06 FOR EROSION CONTROL MEASURES AND NOTES.
8. ALL EXISTING STRUCTURES, UNLESS OTHERWISE NOTED TO REMAIN, FENCING, TREES, & ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED & DISPOSED OF OFF SITE. NO ON SITE BURNING WILL BE ALLOWED.
9. GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
10. SPOT ELEVATIONS SHOWN ARE @ EDGE OF PAVEMENT UNLESS OTHERWISE NOTED ON PLAN.
11. MATCH EXISTING GRADES AT PROPERTY LINES AND/OR CONSTRUCTION LIMITS.
12. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING OF PAVEMENT.
13. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
14. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
15. ELEVATIONS AND CONTOURS ARE PER NAVD DATUM.

BID ALTERNATE NOTE

1. CONCRETE RAMPS SHOWN ON PLAN SHOULD BE INCLUDED AS BID ALTERNATE.

Dial 811 or 1-800-892-0123

811 Know what's **below.** **Call** before you dig.

CALL JULIE 1-800-892-0123

WITH THE FOLLOWING:
COUNTY McHenry
CITY-TOWNSHIP Crystal Lake – Dorr
SEC. & 1/4 SEC. NO.# SW 1/4 OF SEC-25-T-44N-7E

48 hours before you dig
(Excluding Sat., Sun. & Holidays)

NORTH 0 5

BAR IS ONE INCH ON OFFICIAL DRAWINGS
0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY

ISSUED FOR BID – NOT FOR CONSTRUCTION

ARCHITECT:
DEMONICA KEMPER ARCHITECTS
125 N. HALSTED STREET, SUITE 301
CHICAGO, IL 60661
P: 312.496.0000

STRUCTURAL ENGINEER:
IMEG CORP
263 SHUMAN BLVD, SUITE 550
NAPERVILLE, IL, 60563
P: 630.527.2320

CIVIL ENGINEER:
HR GREEN
1391 CORPORATE DRIVE, SUITE 203
MCHENRY, IL, 60050
P: 815.385.1778

ELECTRICAL ENGINEER:
20/10 ENGINEERING
1216 TOWER ROAD,
SCHAUMBURG, IL 60173
P: 847.882.2010

McHenry County College

Fire Tower Replacement

8900 Northwest Hwy #14, Crystal Lake, IL 60012
DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

GRADING DETAIL PLAN

SHEET NUMBER:

C-05

2/26/2026 11:41:24 AM

4/21/2026 2:22:34 PM
J:\2024\2404167\CAD\Dwgs\SheetSet\C\2404167_Grading_Plan.dwg
Xrefs: MCC Fire Tower_DKA-TITLEBLOCK; 2404167_XCS-Dwgn; 180186_XV-Survey; 861500B8-xV-Basemap; 180186_XCS-Dwgn; 210135_XV-Survey; 210135_XCS-Dwgn; XV-Lots; 2404167_XV-Xerox; 2502998_XV-Survey

CONTROL MEASURE GROUP	CONTROL MEASURE	APPL.	KEY	CONTROL MEASURE CHARACTERISTICS	TEMP.	PERMANT
VEGETATIVE SOIL COVER	TEMPORARY SEEDING	X	TS	PROVIDES QUICK TEMPORARY COVER TO CONTROL EROSION WHEN PERMANENT SEEDING IS NOT DESIRED OR TIME OF YEAR IS INAPPROPRIATE.	X	
	PERMANENT SEEDING	X	PS	PROVIDES PERMANENT VEGETATIVE COVER TO CONTROL EROSION, FILTERS SEDIMENT FROM WATER. MAY BE PART OF FINAL LANDSCAPE PLAN.		X
	DORMANT SEEDING		DS	SAME AS PERMANENT SEEDING EXCEPT IS DONE DURING DORMANT SEASON. HIGHER RATES OF SEED APPLICATION ARE REQUIRED.		
	SODDING		SO	QUICK PERMANENT COVER TO CONTROL EROSION. QUICK WAY TO ESTABLISH VEGETATION FILTER STRIP. CAN BE USED ON STEEP SLOPES OR IN DRAINAGEWAYS WHERE SEEDING MAY BE DIFFICULT.		
	GROUND COVER		GC	PROVIDES GROUND COVER, SHRUBS AND TREES IN ADDITION TO PERMANENT VEGETATION. MAY BE USED AS PART OF A FINAL LANDSCAPE PLAN ALONG WITH SHRUBS AND TREES.		
NON VEGETATIVE SOIL COVER	MULCHING		M	ADDED INSURANCE OF A SUCCESSFUL TEMPORARY OR PERMANENT SEEDING. CONTROLS UNWANTED VEGETATION AND PRESERVES MOISTURE. PROVIDES COVER WHERE VEGETATION CANNOT BE ESTABLISHED.		
	AGGREGATE COVER		AG	PROVIDES SOIL COVER ON ROADS AND PARKING LOTS AND AREAS WHERE VEGETATION CANNOT BE ESTABLISHED. PREVENTS MUD FROM BEING PICKED UP AND TRANSPORTED OFF-SITE.		
	PAVING	X	P	PROVIDES PERMANENT COVER ON PARKING LOTS AND ROADS OR OTHER AREAS WHERE VEGETATION CANNOT BE ESTABLISHED.		X
	EROSION BLANKET	X	EB	PROVIDES QUICK TEMPORARY COVER TO CONTROL EROSION WHEN PERMANENT SEEDING TIME OF YEAR IS INAPPROPRIATE AND IN SLOPED AREAS.	X	
DIVERSIONS	RIDGE DIVERSION		RD	TYPICALLY USED ABOVE SLOPES. USED WHERE AN EXCESS OF SOIL IS AVAILABLE.		
	CHANNEL DIVERSION		CD	TYPICALLY USED AT TOP OR BASE OF SLOPES. USED WHEN EXCESS SOIL IS NOT AVAILABLE.		
	COMBINATION DIVERSION		CBD	TYPICALLY USED ANYWHERE ON A SLOPE. SOIL TAKEN OUT OF CHANNEL IS USED TO BUILD THE RIDGE.		
	CURB AND GUTTER		CG	SPECIAL CASE OF DIVERSION USED IN CONJUNCTION WITH A STREET TO DIVERT WATER FROM AN AREA NEEDING PROTECTION.		
	BENCHES		B	SPECIAL CASE OF DIVERSION CONSTRUCTED WHEN WORKING ON CUT SLOPES TO SHORTEN LENGTH OF SLOPE AND ADD SLOPE STABILITY.		
WATERWAYS	BARE CHANNEL		BC	PROVIDES MEANS OF CONVEYING RUNOFF TO DESIRED LOCATION, MAY BE USED TO DRAIN DEPRESSIONAL AREAS. ONLY APPLICABLE WHEN VELOCITY OF FLOW IS VERY LOW.		
	VEGETATIVE CHANNEL		VC	PROVIDED ADDED STABILITY TO CHANNEL. USED WHEN VELOCITY OF FLOW IS NOT EXTREMELY FAST.		
	LINED CHANNEL		LC	USED WHEN VEGETATION WILL NOT PROTECT THE CHANNEL AGAINST HIGH VELOCITIES OF FLOW OR WHERE VEGETATION CANNOT BE ESTABLISHED.		
	DITCH CHECKS	X	DC	PROVIDES AN ENERGY DISSIPATOR ALONG A LENGTHY CHANNEL TO REDUCE VELOCITY OF STORMWATER	X	
ENCLOSED DRAINAGE	STORM SEWER		ST	CAN BE USED TO CONVEY SEDIMENT LADEN WATER TO SEDIMENT BASIN OR IN CONJUNCTION WITH A WATERWAY		
	UNDERDRAIN		UD	USED TO LOWER WATER TABLE AND INTERCEPT GROUNDWATER FOR BETTER VEGETATION GROWTH AND SLOPE STABILITY. USED TO CARRY BASE FLOW IN WATERWAYS AND TO DEWATER SEDIMENT BASINS.		
SPILLWAYS	STRAIGHT PIPE SPILLWAY		SS	USED FOR RELATIVELY SMALL VERTICAL DROPS AND SMALL FLOWS OF WATER		
	DROP INLET PIPE SPILLWAY		DIS	SAME AS PIPE SPILLWAY EXCEPT LARGER FLOWS AND LARGE VERTICAL DROPS CAN BE ACCOMMODATED.		
	WEIR SPILLWAY		W	USED FOR RELATIVELY SMALL VERTICAL DROPS AND FLOWS MUCH GREATER THAN PIPE STRUCTURES.		
	BOX INLET WEIR SPILLWAY		BS	SAME AS WEIR SPILLWAY EXCEPT LARGER FLOWS CAN BE ACCOMMODATED BECAUSE OF LOWER WEIR LENGTH.		
OUTLETS	LINED APRON		LA	PROTECTS DOWNSTREAM CHANNEL FROM HIGH VELOCITY OF FLOW DISCHARGING FROM STRUCTURES.		
	STONE RIP RAP		RR	USED AS AN ENERGY DISSIPATER AT OUTLET STRUCTURES TO REDUCE VELOCITIES		
SEDIMENT BASINS	EMBANKMENT SEDIMENT BASIN		ES	USED WHERE TOPOGRAPHY LENDS ITSELF TO CONSTRUCTING A DAM AND EARTH FILL IS AVAILABLE.		
	EXCAVATED SEDIMENT BASIN		XS	USED WHERE EMBANKMENT COULD CAUSE A HAZARD DOWNSTREAM IN CASE OF FAILURE AND WHEN EXCESS EARTH FILL IS NOT AVAILABLE.		
	COMBINATION SEDIMENT BASIN		CS	USED WHEN TOPOGRAPHY IS SUITABLE BUT ADDITIONAL CAPACITY IS NEEDED.		
SEDIMENT FILTERS	BARRIER FILTER	X	BF	USED FOR SINGLE LOTS OR DRAINAGE AREAS LESS THAN 1/2 ACRE TO FILTER SEDIMENT FROM RUNOFF.	X	
	VEGETATIVE FILTER		VF	USED ALONG DRAINAGE WAYS OR PROPERTY LINES TO FILTER SEDIMENT FROM RUNOFF. SIZE MUST BE INCREASED IN PROPORTION TO DRAINAGE AREA.		
	FILTER BASKET		FB	USED FOR FILTERING SEDIMENT WITHIN THE ROADWAY BEFORE ENTERING THE STORM SEWER		
	INLET PROTECTION		IP	USED FOR FILTERING SEDIMENT WITHIN GRASS AREAS BEFORE WATER ENTERS THE STORM SEWER		
MUD AND DUST CONTROL	STABILIZED CONST. ENTRANCE		SE	PREVENT MUD FROM BEING PICKED UP AND CARRIED OFF-SITE.		
	DUST AND TRAFFIC CONTROL	X	DT	PREVENTS DUST FROM LEAVING CONSTRUCTION SITE.	X	

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A,B,C, D			*	*					
SODDING												
TEMPORARY SEEDING			E				F					

A (1) KENTUCKY BLUEGRASS 50 LBS/ACRE
MIXED WITH PERENNIAL RYEGRASS
30 LBS/ACRE AND CREEPING RED FESCUE
20 LBS/ACRE

B (1A) BLUE GRASS 30 LBS/ACRE
PERENNIAL RYEGRASS 10 LBS/ACRE
DAWSONS RED FESCUE 10 LBS ACRE
SCALDIS HARD FESCUE 10 LBS/ACRE
FULTS SALT GRASS 30 LBS/ACRE

C (4) ANDROPOGON GERNADI (BIG BLUE STEM) 4 LBS/ACRE
ANDROPOGON SCOPARIUS (LITTLE BLUE STEM) 5 LBS/ACRE
BOUTELOVA CURTPENDULA (SIDE OATS GRAMA) 5 LBS/ACRE
ELYMUS CANADENENSIS (WILD RYE) 1 LBS/ACRE
PANCIUM VIRGATUM (SWITCH GRASS) 1 LBS/ACRE
SORGHASTRUM NUTONS (INDIAN GRASS) 2 LBS/ACRE
ANNUAL RYE GRASS 25 LBS/ACRE
OATS, SPRING 25 LBS/ACRE
PERENNIAL RYE GRASS 15 LBS/ACRE

D (4B) ANNUAL RYE GRASS 250 LBS/ACRE
OATS, SPRING 250 LBS/ACRE
METLAND GRASSES 6 LBS/ACRE

E SPRING OATS 100 LBS/ACRE

F WHEAT OR CEREAL RYE
150 LBS/ACRE.

G SOD

H ALFALFA/SOYBEANS 100-250 LBS/ACRE (VERIFY WITH TCR)

* IRRIGATION NEEDED DURING JUNE AND JULY

** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.

( ) IDOT STANDARD

EROSION CONTROL NOTES

- All sedimentation and erosion control regulations shall be adhered to per City of Crystal Lake requirements.
- All erosion control measures shall be installed prior to the start of construction.
- No land disturbing activities shall not commence until approval to do so has been received by governing authorities, in addition to, no land clearing or grading shall begin until all perimeter erosion and sediment control measures have been installed. (Including storm water pollution prevention plan per the development criteria.)
- If any additional soil erosion measures are deemed necessary by the City Engineer or his representative. These measures must be immediately implemented by the contractor.
- The general contractor shall strictly adhere to the storm water pollution prevention plan (SWPPP) during construction operations.
- All topsoil shall be stripped prior to filling.
- All exposed areas shall be seeded as specified within 14 days of final grading.
- Should construction stop for longer than 14 days, the site shall be seeded as specified.
- Sediment and erosion control measures shall be inspected at least once every seven (7) days and within 24 hours of a rainfall exceeding 0.5 inches during a 24-hour period. All maintenance required by inspection shall commence within 24 hours and be completed within 48 hours of report.
- This plan shall not be considered all inclusive as the general contractor shall take all necessary precautions to prevent soil sediment from leaving the site.
- General contractor shall comply with all state and local ordinances that apply.
- Additional erosion and sediment control measures will be installed if deemed necessary by on site inspection.
- If installation of storm drainage system should be interrupted by weather or nightfall, the pipe ends shall be covered with filter fabric.
- General contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
- All erosion and sediment control practices shall be maintained and repaired as needed to ensure effective performance of the required erosion control measures.
- All erosion and sediment control work shall conform to the I.D.O.T. Manual for, standards and procedures for erosion control.
- All construction will adhere to the requirements set forth in the IEPA's new construction site activities national pollutant discharge elimination system (NPDES) storm water permit.
- All roadways and driveways shall be cleaned at the end of each construction day.
- All disturbed areas shall be stabilized within 7 days of active disturbance.
- All erosion control measures shall be disposed of within 30 days of final stabilization of the site.
- Ground cover for 5:1 slopes or greater shall be established as soon as possible.
- All disturbed areas to to restored w/ 6" topsoil respread & seeding/sodding unless otherwise noted on plans
- Filter Baskets or Silt filter fabric shall be placed between frame and grate until vegetation is established. (see detail)
- Utilize excelsior blanket on all slopes of 5:1 or greater.
  *Seeding per I.D.O.T. Manual, section 251,standard specifications for road and bridge construction, (latest edition
  *Class 1A type
  *Mulch/hydroseed per I.D.O.T. Manual, section 251, standard specifications for road and bridge construction, (latest edition
  *Mulch/hydroseed method 2, procedure 3
- No dimensions shall be assumed by scaling.
- No known drain tiles are present on the proposed development, if tiles are encountered during construction please notify the engineer immediately.
- No part of the proposed project is located within a flood hazard 10-100yr area a flood hazard area
- Excess material shall be placed at specified location unless otherwise specified by owner and approved by engineer for use of lot grading. Stockpiles shall be surrounded with filter fence and shall be seeded per I.D.O.T. Manual (latest addition) (temporary) if left more than 14 working days.
- General contractor shall notify all utility companies having underground utilities on site or in right-of-way prior to excavation. Contractor shall contact utility locating company and locate all utilities prior to grading start.

PHASING NOTES:

SEQUENCE OF MAJOR ACTIVITIES

The Contractor will be responsible for implementing the following erosion control and storm water management control measures. The Contractor may designate these tasks to certain subcontractors as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the Contractor. The order of activities will be as follows (refer to the Erosion and Sediment Control Plan Sheet contained in this SWPPP for details and refer to the Suggested Phasing Plan in the design drawings for construction sequencing):

A. A pre-construction meeting shall be held by the **Site Project Manager** and the Operator's Engineer prior to land disturbing activities.
B. Install perimeter silt fences and inlet protection in the locations shown on the Erosion Control plan sheets.
C. Implement erosion control measures around the existing storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control plan sheets.
D. Begin clearing and grubbing operations if applicable. Clearing and grubbing shall be done only in areas where earthwork will be performed and only in areas where building is planned to commence within 7 days after clearing and grubbing.
E. Disturbed areas of the site where Construction Activity has ceased for more than 7 days shall be temporarily seeded and watered.
F. Commence site grading.
G. Construct gutter inlets, area inlets, storm sewer manholes and proposed storm sewer.
H. Install inlet / outlet protection around the constructed storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control plan sheets.
I. Construct utilities
J. Finalize pavement subgrade preparation.
K. Remove inlet protection around inlets and manholes no more than 48 hours prior to placing stabilized base course.
L. Install base material as required for pavement.
M. Carry out final grading and seeding, sodding and planting, including rolled erosion control products where shown on the Erosion Control plan sheets.
N. Remove silt fencing only after all paving is complete and exposed surfaces are stabilized.

SPECIFICATIONS & GENERAL NOTES

NOTES:

1. Site Description.

a. The following is a description of the construction activity which is the subject of this plan:
The proposed development consists of construction of **a Fire Tower building, pavement installation, grading, and restoration.** The construction activities for site improvements will include: **site clearing, grubbing, mass grading, removals, pavement construction, building construction, installation of utilities, soil erosion and sedimentation control measures**, as a minimum.

b. The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site such as grubbing, excavation, and grading:

The sequence of the construction activities may be as follows:
See Sequence of major activities on this sheet.

c. The total area of the construction site is estimated to be **0.37 ± acres.**

The total area if the site that is estimated to be disturbed by excavation, grading, or other activities, is **0.37 ± acres.**

2. Controls.

This section of the plan addresses the various controls that will be implemented for each of the major construction activities described in 1.b above. For each measure discussed, the contractors will be responsible for its implementation as indicated. Each such contractor has signed the required certification on forms which are attached to, and are a part of, this plan.

a. Erosion and Sediment Controls.

(i) STABILIZATION PRACTICES. Provided below is a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Except as provided in 2.a. (i) (A) and 2.b. stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portions of the site where construction activity will not occur for a period of 21 or more calendar days.

(A) Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following interim and permanent stabilization practices, as a minimum will be implemented to stabilize the disturbed area of the site:

1 Temporary Seeding
2 Permanent seeding
3 Erosion Blanket
4 Barrier filter
5 Dust & Traffic Control

(ii) STRUCTURAL PRACTICES. Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. The installation of these devices may be subject to Section 404 of the Clean Water Act.

1. Vegetated drainage swales
2. Permanent seeding
3. Filter fabric

b. Erosion Control. It shall be the Contractor's responsibility to provide adequate erosion control on the job site. The following erosion control sequence shall be adhered to:

A. A pre-construction meeting shall be held by the **Site Project Manager** and the Operator's Engineer prior to land disturbing activities.
B. Install perimeter silt fences and inlet protection in the locations shown on the Erosion Control plan sheets.
C. Implement erosion control measures around the existing storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control plan sheets.
D. Begin clearing and grubbing operations if applicable. Clearing and grubbing shall be done only in areas where earthwork will be performed and only in areas where building is planned to commence within 7 days after clearing and grubbing.
E. Disturbed areas of the site where Construction Activity has ceased for more than 7 days shall be temporarily seeded and watered.
F. Commence site grading.
G. Construct gutter inlets, area inlets, storm sewer manholes and proposed storm sewer.
H. Install inlet / outlet protection around the constructed storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control plan sheets.
I. Construct utilities
J. Construct utilities
K. Finalize pavement subgrade preparation.
L. Construct all curb and gutter. Inlet protection may be removed temporarily for this construction.
M. Remove inlet protection around inlets and manholes no more than 48 hours prior to placing stabilized base course.
N. Install base material as required for pavement.
O. Carry out final grading and seeding, sodding and planting, including rolled erosion control products where shown on the Erosion Control plan sheets.
P. Remove silt fencing only after all paving is complete and exposed surfaces are stabilized.
Q. Remove temporary construction exits

Any siltation of conduits, structures, or ditches shall be cleaned and maintained by the Contractor, on a weekly basis, until the seeding has taken hold. All washouts, gullies, etc. will be regraded and reseeded by the Contractor, at the Contractor's expense.

The Contractor's responsibility for erosion control shall extend throughout the construction process. The Contractor shall be responsible for cleanup of paved surfaces within and adjacent to the project.

All erosion control practices shall be in compliance with the latest revision of the "Standard Specifications for Road and Bridge Construction," by the Illinois Department of Transportation and with "Standards and Specifications for Soil Erosion and Sedimentation Control" as published by the Illinois Environmental Protection Agency.

If a topsoil stockpile location is provided and approved by the City, Contractor shall establish erosion control measures for the stockpile if it is to remain in place for more than three days. In addition, barrier filter fence shall enclose topsoil stockpile location with exception of truck access during construction hours.

c. Stormwater Management.

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

The practices selected for implantation were determined on the basis of the technical guidance contained in IEPA's Standard Specifications for Soil Erosion and Sedimentation Control, and other ordinances listed in the Specifications.

The stormwater pollutant control measures shall include:

1. Silt filter fence
2. Drainage swales
3. Storm sewers
4. Rip-rap outlet protection

(ii) Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Stormwater Management Control includes
1 Filter Fabric

3. Other Controls.

(i) Waste Disposal. The solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed off-site by the contractor. The contractor is responsible to acquire any permit required for such disposal. Burning on the site will not be permitted. No solid materials, including building materials, shall be discharged into Waters of the State, except as authorized by a **Section 404 permit.**

(ii) The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

The sanitary sewage will be discharged to the proposed sanitary sewer constructed per IEPA and local standards.

a. Approved State or Local Plans.

The management practices, controls and other provisions contained in this plan are at least as protective as the requirements contained in the latest amendment of the Illinois Environmental Protection Agency's Standards and Specifications for Soil and Erosion and Sediment Control dated **October 1987.** Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Plan, and the Municipal Subdivision Ordinance. Requirements specified in sediment and erosion control site plans or site permits or stormwater management or site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI to be authorized to discharge under this permit, incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

b. Maintenance.

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, erosion and sediment control measures and other protective measures identified in this plan and Standard Specifications.

Vegetative erosion control measures: The vegetative growth of temporary and permanent seeding, sodding, vegetative channels, vegetative filter, etc. shall be maintained periodically and supply adequate watering and fertilizer. The vegetative cover shall be removed and reseeded as necessary.

Silt filter fence: The damaged silt filter fence shall be restored to meet the standards or removed and replaced as needed.

Rip-rap outlet protection: It shall be inspected after high flows for any scour beneath the Rip-rap or for stones that have been dislodged. It shall be repaired immediately.
Inlet Protection: Shall be inspected and emptied of silt if filled as required.

Disturbed areas shall be stabilized with temporary or permanent measures within 7 calendar days following the end of active disturbance, or redisturbance, consistent with the following criteria:

(i) Appropriate temporary or permanent stabilization measures shall include seeding, mulching, sodding, and/or non-vegetative measures.
(ii) Areas having slopes greater than 12 percent shall be stabilized with sod, mat, or blanket in combination with seeding or equivalent.

Soil storage piles containing more than 10 cu. yds. of material shall not be located with a downslope drainage length less than 25 feet to a roadway or drainage channel. Filter barriers, including straw bales, filter fence, or equivalent, shall be installed immediately on the down slope of the piles.

4. Inspections.

The Owner, or Owner's representative shall provide qualified personnel to inspect disturbed areas of the construction site which have not been finally stabilized, structural control measures and location where vehicles enter or exit the site. Such inspections shall be conducted at least once every seven (7) calendar days within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

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

b. Based on the results of the inspection, the description of potential pollutant sources identified in section 1 above and pollution prevention measures identified in section 2 above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within 7 calendar days following the inspection.

c. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this stormwater pollution prevention plan and actions taken in accordance with section 4.b. shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI.G of the general permit.

d. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer or Resident Technician shall complete and file an "Incidence of Noncompliance" (ION) report for the identified violation. The Resident Engineer or Resident Technician shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit. The report of noncompliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Permit Section
P.O. Box 19276
Springfield, Illinois 62794-9276

5. Non-Stormwater Discharges.
Except for flows from fire fighting activities, sources of non-stormwater that may be combined with stormwater discharges associated with the industrial activity addressed in this plan, are described below:

a. Water main flushing
b. Fire hydrant flushing
c. Watering for dust control
d. Irrigation drainage for vegetative growth for seeding, etc..

The pollution prevention measures, as described below, will be implemented for non-stormwater components of the discharge:

The fire hydrant and water main shall not be flushed directly on the exposed area of sub grade of the pavement. Hoses shall be used to direct the flow into the storm sewer system, if available.

The erosion due to irrigation of seeding shall be considered minor.

Contractor to provide the above non-stormwater discharged control to the standard specification required by the City or the approved equal.

6. Monitoring and Management Plan
A three-year maintenance and monitoring plan is required after installation of native landscaping.
See Project Specifications for details.

CONSTRUCTION SEQUENCE

1. File stormwater NPDES permit with the IEPA at least 30 days prior to beginning work.
2. Install all permanent and temporary erosion control practices, i.e. diversions, vegetated swales, stabilized construction entrances, temporary silt basins, polymer systems, and silt fences.
3. City inspection and signoff.
4. Strip topsoil.
5. Stabilize stockpiles with vegetative cover and additional erosion control measures.
6. City inspection and signoff.
7. Begin mass grading.
8. Add additional soil erosion and sediment control as needed. In particular the CLSO requirement for stabilization within 14 days of temporary or permanent cessation of grading must be met and will be vigorously enforced by the City.
9. Building and pavement construction.
10. Permanent site stabilization.
11. City inspection.

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CIVIL ENGINEER:
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1391 CORPORATE DRIVE, SUITE 203
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ELECTRICAL ENGINEER:
20/10 ENGINEERING
1216 TOWER ROAD,
SCHAUMBURG, IL 60173
P: 847.882.2010

McHenry County College

Fire Tower Replacement

8900 Northwest Hwy #14, Crystal Lake, IL 60012

DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
EROSION CONTROL DETAILS

SHEET NUMBER:
C-06

2/26/2026 11:41:24 AM

ISSUED FOR BID – NOT FOR CONSTRUCTION

Xrefs: MCC Fire Tower_DKA-TITLEBLOCK

4/21/2026 2:23:22 PM
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GE-02a

GENERAL SITE-WORK:

1. Pre-Construction meeting shall be conducted with City Staff and all Contractors prior to commencing any grading or underground utility construction activities (schedule meeting with the Community Development Department at 815-356-3615).
2. 24-hour Emergency contact numbers shall be provided to City Staff at the Pre-Construction meeting.
3. Working hours shall be limited to the hours of 7:00 a.m. and 7:00 p.m. on weekdays only (except in cases of emergency). Non-emergency work on weekends or holidays is not permitted per City Code except under written permission from the City Engineer. The owner is responsible for the City Inspector cost of overtime inspection beyond the normal eight (8) hour day, including weekends and holidays.
4. Public/private streets shall be kept free of dirt and debris with regular cleaning, sweeping, and scraping conducted by the Contractor. Junk and debris shall not be allowed to accumulate, blow, or scatter onto streets or adjacent properties.
5. J.U.L.I.E. shall be contacted for utility locations on-site and in the adjacent rights-of-way.
6. Contractor shall provide and maintain fencing, barricades, traffic control signs, and other safeguarding measures during the course of all work to protect the public from the construction operations.
7. Maintain access to adjacent streets during construction. No closing of streets unless approval is first obtained from the agency with jurisdiction (City of Crystal Lake, McHenry County Department of Transportation, Illinois Department of Transportation, etc).
8. Any damage to public rights-of-way, public utilities, streets, curb, etc. shall be repaired/replaced as soon as possible and as directed by the City Engineer.
9. The contractor shall give the City of Crystal Lake, Illinois Department of Transportation, and any other governmental agency having jurisdiction, at least two (2) working days notice excluding Saturday and Sunday prior to the initiation of any phase of construction. Contractor shall immediately notify if construction has ceased and renew the two (2) working day notification thereafter.
10. The Contractor shall be responsible for obtaining all required permits for construction prior to commencement along or across existing streets or highways. The Contractor shall make arrangements for the proper bracing, shoring and other protection of all roadways before construction begins.

GRADING:

1. The grading and construction of the site improvements shall not cause ponding of storm sewer water. All areas adjacent to these improvements shall be graded to allow positive drainage.
2. The proposed grading elevations shown on the plans are finished grade. A minimum of six (6) inches of topsoil is to be placed before finished grade elevations are achieved.
3. Embankment material within parkway and open space areas shall be compacted to a minimum of ninety percent (90%) of maximum density in accordance with ASTM Specification D-1557 (modified proctor method), or to such other density as may be determined appropriate by the soils engineer.
4. All subgrade material shall have a minimum CBR (California Bearing Ratio) of 3.0 as determined by the soils engineer, or base replacement and pavement design revisions shall be provided which are adequate to obtain equivalent pavement strength.
5. Proposed pavement areas, building pads, driveways and sidewalks and yard/open space areas shall be excavated or filled to plus or minus 0.1 foot of design subgrade elevations by the Contractor.
6. Any borrow pit locations shall be identified by the Contractor on a copy of the approved site plans and forwarded to the Engineering Division at least 24-hours prior to excavation. Provide backfill compaction reports from a geotechnical engineer and as-built plans to the Engineering Division for any borrow pit area.
7. Backfill shall be monitored by a geotechnical engineer on-site with compaction reports forwarded to the Engineering Division for review.
8. Water truck shall be on-site at all times during mass-grading operations and be available as needed for the purposes of dust control or at the request of City Staff.
9. Use of City fire hydrants is not allowed unless approved (separate from this permit) by the Public Works Department and a hydrant meter and RPZ is obtained from the City of Crystal Lake Water Division (815-356-3614). Only the City of Crystal Lake Water Division may operate valves and hydrants.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 3. 4.	STANDARD NOTES AND SPECIFICATIONS	GE-02a Date: 01/30/15 Drawn DD Checked AW	City of Crystal Lake Illinois

I:\ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS\

GE-02b

TOPSOIL STOCKPILING:

1. Location of any on-site topsoil stockpiles shall be identified on the approved plans with silt fence installed around the perimeter of the stockpile.
2. Topsoil stockpiled for future use shall be relatively free from large roots, sticks, weeds, brush, stones larger than one (1) inch diameter, or other litter and waste products including other extraneous materials not conducive to plant growth.
3. Topsoil shall be stockpiled in sequences to eliminate any re-handling or double movements by the Contractor. Failure to properly sequence the stockpiling operations shall not constitute a claim for additional compensation. No material shall be stockpiled in front yards, in utility easements, or in the right-of-way lines.
4. If a stockpile is to remain in place for more than (14) calendar days, it is required that the stockpile meet the requirements as outlined in section 595 of the City Code.

UNDERGROUND UTILITY:

1. The Contractor shall coordinate water main, water service, sanitary and storm sewer inspections and testing with the Community Development at least 24 hours in advance.
2. All main line sanitary shall be cleaned and televised (provide DVD to the City's Engineering Division).
3. All manhole or valve covers shall be imprinted "City of Crystal Lake Sanitary", or "City of Crystal Lake Storm", or "City of Crystal Lake Water" as directed by the City.
4. Reference the latest edition of the Standard Specifications for Water and Sewer Main Construction in Illinois.
5. Existing manholes to be circular cored and booted.

EROSION CONTROL:

1. All specified erosion control measures shall be installed and maintained per the requirements of the Crystal Lake Stormwater Ordinance in accordance with the active NPDES permit.
2. All slopes 4:1 or steeper shall be sodded or blanketed immediately after mass earthwork.
3. All overland flow routes to be stabilized by sod or blanket.
4. Erosion control measures to be inspected and approved by City Engineering Division prior to additional work on site.
5. Continuous monitoring of erosion control measures is required. Maintain records of weekly reports per the City of Crystal Lake Stormwater Ordinance.
6. The Contractor shall implement any additional erosion control measures deemed necessary by the City per the standards of the City Of Crystal Lake Stormwater Ordinance.
7. All storm sewer catch basins, sumps and/or retention basins provided are to be cleaned at the end of construction of the project prior to final acceptance. Cleaning may also be required during the course of the construction of the project if it is determined that the silt and debris traps are not properly functioning and their performance is impaired.
8. Rip-rap material RR 2 (6") - RR4 (16") shall be in accordance with Article 281
9. Projects of 1 Acre or greater must obtain an NPDES permit prior to commencement of any construction activity.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 02/25/2020 3. 4.	STANDARD NOTES AND SPECIFICATIONS	GE-02b Date: 01/30/15 Drawn DD Checked AW	City of Crystal Lake Illinois

I:\ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS\

GE-02d

WATER MAIN:

1. Water main shall be Ductile Iron.
   a) Ductile Iron water main shall be Class 52 conforming to ANSI/AWWA C151/A21.51-09.
   b) Ductile Iron fittings shall conform to ANSI/AWWA C153/A21.53 with mechanical joint gaskets.
2. All bolted connections shall be torqued to the manufacturer's specifications. The Contractor shall verify the manufacturer's specification with an approved torque wrench.
3. Thrust blocking or Mega-Lugs with Mega-Bond coating or pre-approved equal shall be installed on water mains at all bends, tees, elbows, etc. except as noted below.
4. Thrust blocks not permitted with 45 degree vertical bends in water main (these shall be restrained with Mega-Lug or pre-approved equal.
5. Ductile iron pipe shall be encased in polyethylene and shall conform with ANSI/AWWA C105/A21.10 - 10 and ASTM A674-10.
6. Minimum cover from finished grade to top of water main shall be six (6) feet; Maximum cover shall be eight (8) feet.
7. Water Main Taps: An Illinois licensed plumber is required for any water main tap.
8. All water mains shall be subjected to a 2 hour pressure and leakage test by the Contractor in accordance with City Detail UW-09A and UW-09B. Water mains shall be chlorinated in accordance with City Detail UW-09A.
9. The Underground Contractor shall consider Incidental to the contract any chlorination and testing of existing water main where connections to and conclusion of such mains is indicated on the drawing.
10. For repairs to existing PVC watermains, see details UW-12 and UW-13

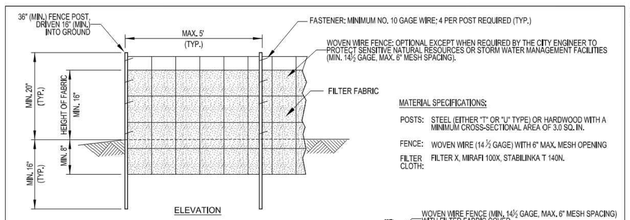
PAVING:

1. All subgrades and bases shall be proof-rolled and approved by the Engineering Division prior to base or binder installation.
2. Subgrade and proposed pavements shall be finished by the Excavation Contractor to within 0.1 foot plus or minus, of plan elevation.
3. The Paving Contractor shall ensure that the subgrade has been properly prepared and that the finished top of subgrade elevation has been graded within the tolerances allowed in these specifications. Unless the Paving Contractor advises the owner and engineer in writing prior to fine grading for base course construction, it is understood that the Contractor has approved and accepts responsibility for the subgrade.
4. For the purpose of providing handicap accessibility and complying with the American Disability Act and City Standards, curbs shall be depressed at locations where public walks or pedestrian paths intersect curb lines at street intersections and other locations as directed.
5. ¾ Inch thick premolded fiber expansion joints with two (2) No. 4 plain round steel dowel bars shall be installed at designated intervals and at all P.C., P.T., curb returns and at the end of each pour. Alternate ends of the dowel bars shall be greased and fitted with metal expansion tubes.
6. ¾ Inch thick fiber expansion joints shall be used in every case where the sidewalk coincides with the curb and gutter. Contraction joints shall be saw cut at designated intervals in the curb. The cost of these joints shall be considered as incidental to the cost of the contract.
7. All poured in place concrete curb and gutter shall incorporate two (2) No. 4 reinforcing bars installed wherever the curb and gutter crosses utility service lines. the cost of which shall be considered incidental to the cost of concrete curb and gutter.
8. Sidewalks (where required) shall be of the thickness and dimensions as shown in the construction plans. All sidewalk concrete shall be a minimum of 6.1 bag mix (or IDOT class SI concrete) and shall develop a minimum of 3,500 psi compressive strength at fourteen (14) days. Contraction joints shall be set at five (5) foot centers, and one-half inch (½ Inch) premolded fiber expansion joints at fifty (50) foot centers and where the sidewalk meets the curb or another sidewalk, or at the end of each pour. All sidewalks constructed over utility trenches and/or abutting driveway aprons shall be reinforced with three (3) No. 4 reinforcing bars (10 foot minimum length).

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. KL 01/25/2021 Torque Specification 3. 02/06/2023 JRG - Update Water Main Note 8 4. 07/14/2023 JRG - Update Water Main Notes 1, 5, 10	STANDARD NOTES AND SPECIFICATIONS	GE-02d Date: 01/30/15 Drawn DD Checked AW	City of Crystal Lake Illinois

I:\ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS\

EC-01



MATERIAL SPECIFICATIONS:

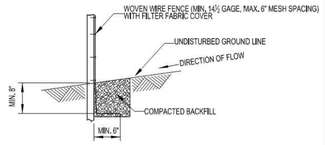
POSTS: STEEL (EITHER "T" OR "U" TYPE) OR HARDWOOD WITH A MINIMUM CROSS-SECTIONAL AREA OF 3.0 SQ. IN.

FENCE: WOVEN WIRE (14 ½ GAGE) WITH 6" MAX. MESH OPENING

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T 140N.

NOTES:

1. TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED AS NEEDED, THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POST WITH TIES OR STAPLES
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION
4. WHEN TWO (2) SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX (6) INCHES AND FOLDED
5. MATERIAL SHALL BE REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE
6. DOUBLE ROWS OF SILT FENCE SPACED FIVE (5) FEET APART SHALL BE PLACED AROUND EXISTING STORMWATER MANAGEMENT FACILITIES OR WETLANDS AS ADDITIONAL PROTECTION WHEN REQUIRED BY CITY ENGINEER

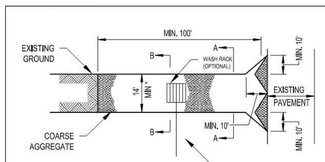


FABRIC ANCHOR DETAIL

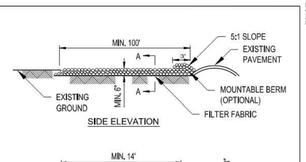
Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 3. 4.	SILT FENCE	EC-01 Date: 12/4/2012 Drawn DD Checked AW	City of Crystal Lake Illinois

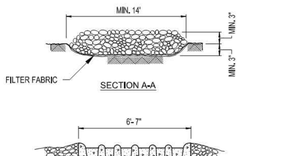
I:\ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS\

EC-02



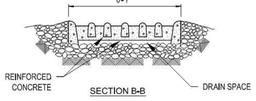
* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION.





NOTES:

1. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 282 OF THE IDOT STANDARD SPECIFICATIONS AND SHALL BE PLACED OVER THE CLEARED AREA PRIOR TO THE PLACEMENT OF ROCK.
2. ROCK OR RECLAIMED CONCRETE SHALL MEET ONE OF THE FOLLOWING IDOT COARSE AGGREGATE GRADATIONS, CA-1, CA-2, CA-3 OR CA-4.
3. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
4. IF WASH RACKS ARE USED, THEY SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

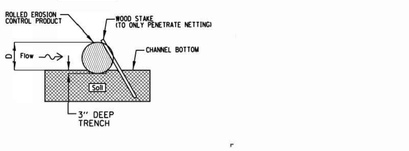


Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 3. 4.	CONSTRUCTION ENTRANCE	EC-02 Date: 07/31/2012 Drawn DD Checked AW	City of Crystal Lake Illinois

I:\ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS\

ROLLED EROSION CONTROL PRODUCTS

STAKING PATTERN GUIDE



NOTES:
1. OVERLAP MINIMUM IS THE DIAMETER OF THE ROLL.
2. 4' SPACING FOR WATTLES.
3. 2' SPACING FOR ROLLED EXCELSIOR.
4. OR SPACE ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

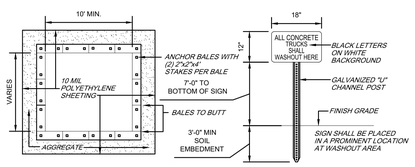
STAKE DETAIL

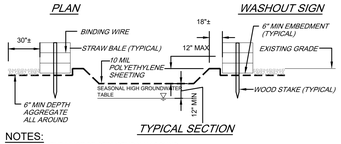
STANDARD DITCH CHECK DETAIL

NOTES:
1. DRAWINGS ARE NOT TO SCALE.
2. ENDS OF WATTLES OR ROLLED EXCELSIOR SHALL BE TURNED AT LEAST 6" UPSLOPE.
3. RECOMMENDED STAKES ARE 1 1/8" WIDE x 1 1/8" THICK x 30" LONG.
4. STAKES SHALL NOT EXTEND ABOVE THE STRAW WATTLE MORE THAN 2".
5. SPACING: THE TOE OF THE UPSTREAM DITCH CHECK SHALL CREATE A HORIZONTAL LINE WITH THE TOP OF THE DOWNSTREAM DITCH CHECK.

REFERENCE		STANDARD DWG. NO.
Project		IUM-514
Designed	Date	SHEET 1 OF 1
Checked	Date	DATE 08-2-2019
Approved	Date	

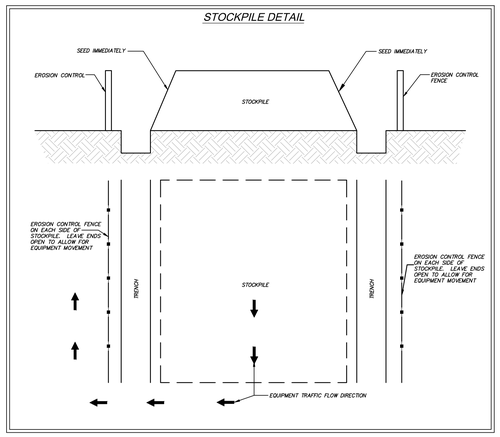
CONCRETE WASHOUT AREA



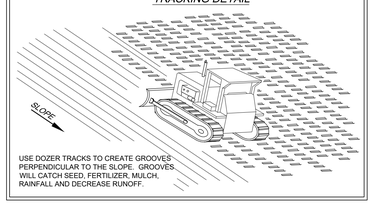


NOTES:
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

STOCKPILE DETAIL



TRACKING DETAIL



USE DOZER TRACKS TO CREATE GROOVES PERPENDICULAR TO THE SLOPE. GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE RUNOFF.

ISSUED FOR BID – NOT FOR CONSTRUCTION

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P: 847.882.2010

McHenry County College
Fire Tower Replacement
8900 Northwest Hwy #14, Crystal Lake, IL 60012
DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
EROSION CONTROL DETAILS

SHEET NUMBER:
C-07

2/26/2026 11:41:24 AM

Xrefs: MCC Fire Tower_DKA-TITLEBLOCK

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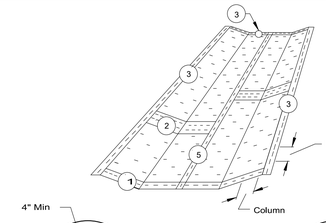
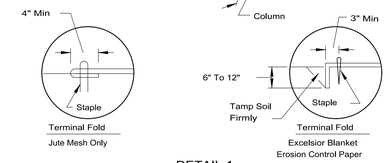
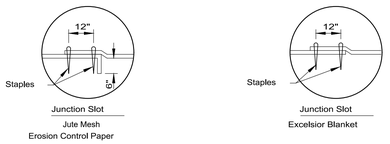
EROSION BLANKET PLAN





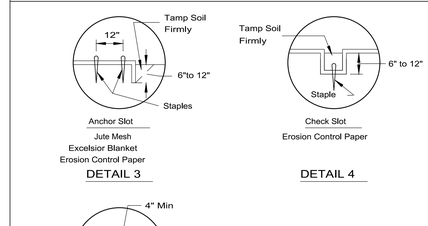
DETAIL 1



DETAIL 2

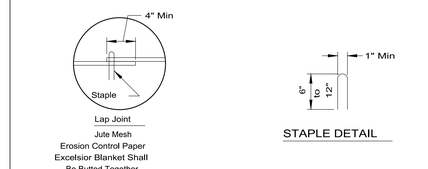
REFERENCE			STANDARD DWG. NO.
Project		NRCS Natural Resources Conservation Service	IL-530
Designed ____ Date ____			SHEET 1 OF 2
Checked ____ Date ____			DATE 5-24-94
Approved ____ Date ____			

EROSION BLANKET PLAN



DETAIL 3

DETAIL 4



DETAIL 5

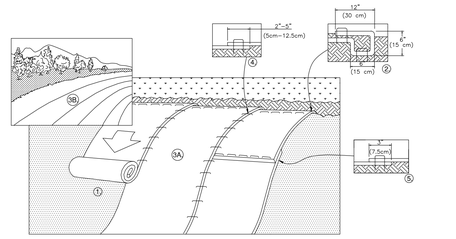
STAPLE DETAIL

NOTES:

1. On erosion control paper, check slots, in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
2. Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4'x 225' roll of material and 125 staples are required per 4'x 150' roll of material.
3. Erosion control material shall be placed loosely over ground surface. Do not stretch.
4. All terminal ends and transverse laps shall be stapled at approximately 12" intervals.

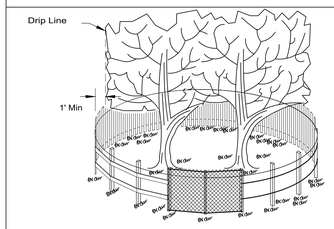
REFERENCE			STANDARD DWG. NO.
Project		NRCS Natural Resources Conservation Service	IL-530
Designed ____ Date ____			SHEET 2 OF 2
Checked ____ Date ____			DATE 3-1-95
Approved ____ Date ____			

SLOPE INSTALLATION

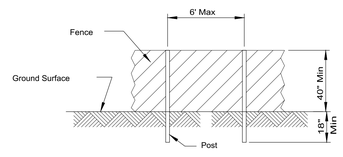


1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
   NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.
   NOTE:
   *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

TREE PROTECTION - FENCING



SIDE VIEW

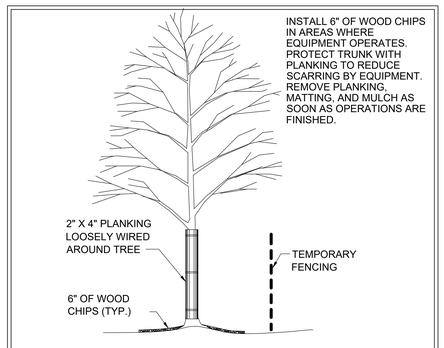


POST AND FENCE DETAIL

NOTES:

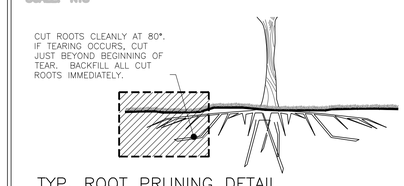
1. The fence shall be located a minimum of 1 foot outside the drip line of the tree to be saved and in no case closer than 5 feet to the trunk of any tree.
2. Fence posts shall be either standard steel posts or wood posts with a minimum cross sectional area of 3.0 sq. in.
3. The fence may be either 40"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

REFERENCE			STANDARD DWG. NO.
Project		NRCS Natural Resources Conservation Service	IL-690
Designed ____ Date ____			SHEET 1 OF 1
Checked ____ Date ____			DATE 4-7-94
Approved ____ Date ____			



TYP. TREE TRUNK PROTECTION DETAIL

SCALE: NTS



TYP. ROOT PRUNING DETAIL

SCALE: NTS

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P: 847.882.2010

McHenry County College

Fire Tower Replacement

8900 Northwest Hwy #14, Crystal Lake, IL 60012
DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
EROSION CONTROL DETAILS

SHEET NUMBER:
C-08

2/26/2026 11:41:24 AM

Xrefs: MCC Fire Tower_DKA-TITLEBLOCK

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EXISTING 1-STORY BUILDING TO BE DEMOLISHED COMPLETE. SEE CIVIL AND STRUCTURAL FOR DETAILED DEMOLITION SCOPE.

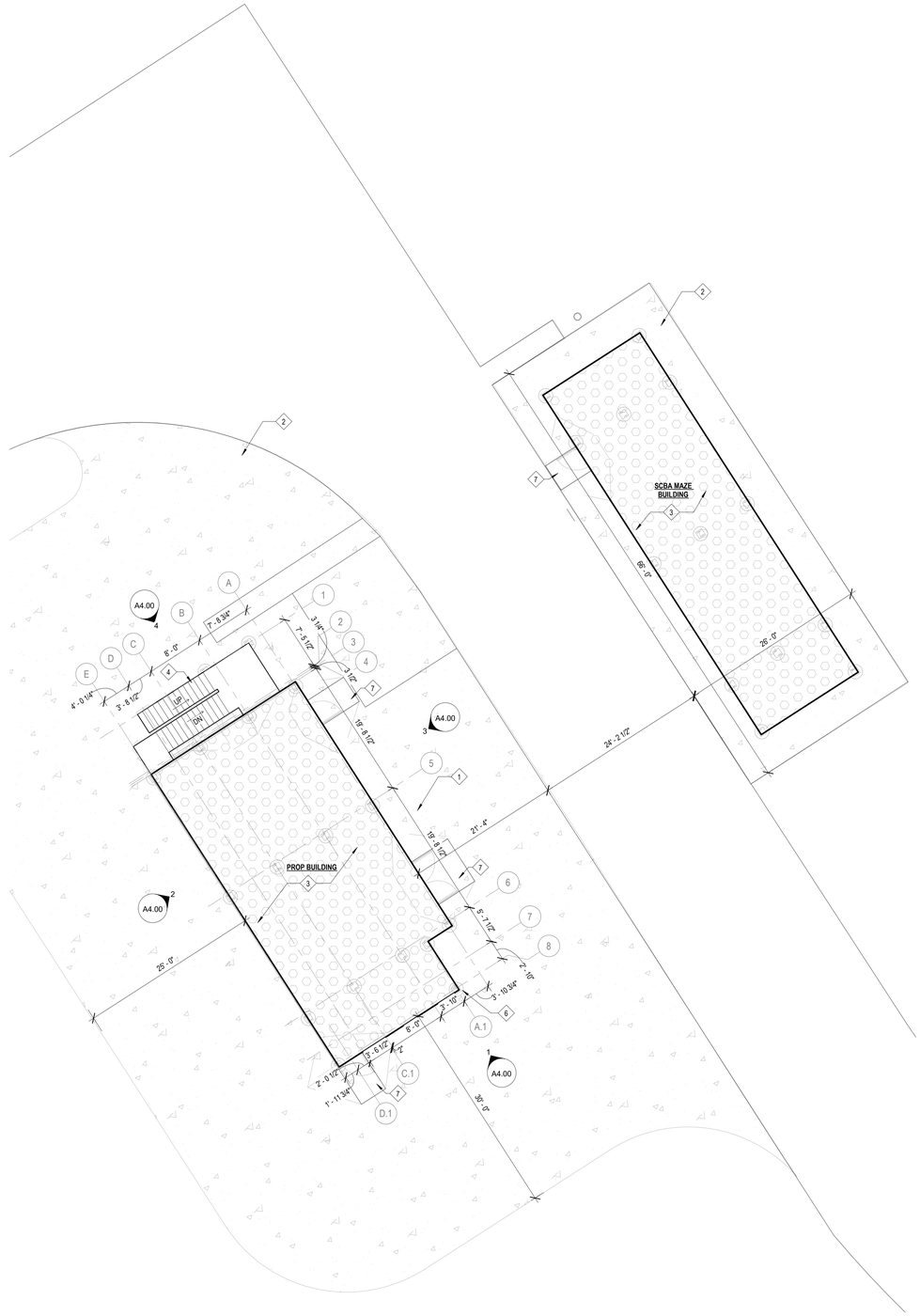
SECTION A:
APPROX HEIGHT: 31' - 0"
APPROX. DIMENSIONS: 20' - 0" x 20' - 0"

SECTION B:
APPROX. HEIGHT:
LOW ROOF: 14' - 0"
HIGH ROOF: 26' - 0"
APPROX. DIMENSIONS: 23' - 4" x 31' - 4"

GENERAL BUILDING CONSTRUCTION:
FOUNDATION SYSTEM:
SHALLOW CONCRETE SPREAD FOOTINGS WITH CONCRETE FOUNDATION WALLS.
WALL SYSTEMS:
LOAD-BEARING CMU MASONRY WALLS AND INTERIOR PARTITIONS. HM DOORS AND FRAMES AND MISC. INTERIOR NON-LOAD BEARING WOOD FRAME PARTITIONS. METAL FRAMED EXTERIOR WINDOW, DOOR, AND ACCESS PANEL SYSTEMS.
FLOOR SYSTEM:
CONCRETE SLAB ON GRADE AT FIRST FLOOR. PRE-CAST CONCRETE PLANKS AT UPPER FLOOR LEVELS.
STAIR CONSTRUCTION:
STEEL STAIRCASE, CONCRETE TREADS AND LANDINGS.

1 DEMOLITION SITE PLAN
1/8" = 1'-0"

0' 8' 16' 32'



2 NEW WORK SITE PLAN
1/8" = 1'-0"

0' 4' 8' 16'

DEMOLITION FLOOR PLAN GENERAL NOTES:

1. PRIOR TO AND DURING ANY DEMOLITION THE CONTRACTOR SHALL VERIFY AND MAINTAIN THE BUILDING'S STRUCTURAL INTEGRITY.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AS REQUIRED.
3. REMOVE ALL HANGERS, SUSPENSION SYSTEMS, SUPPORT FRAMING, EQUIPMENT PADS, ANCHORS, ATTACHMENT HARDWARE AND RELATED APPURTENANCES CONNECTED WITH THE WORK TO BE DEMOLISHED. IF COMPLETE REMOVAL IS NOT POSSIBLE, CUT DEVICES AS CLOSE AS POSSIBLE TO ADJOINING SURFACES OR ORIGIN OF SUPPORT.
4. DURING THE BIDDING PERIOD, EACH BIDDING CONTRACTOR SHALL VISIT THE SITE AND THE FACILITY TO DETERMINE EXISTING CONDITIONS. CONTRACTOR'S FAILURE TO REASONABLY DETERMINE AND/OR ANTICIPATE THE EFFECT OF EXISTING CONDITIONS AND THE WORK INVOLVED THEREBY SHALL NOT BE JUSTIFICATION FOR ADDITIONAL COMPENSATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
5. ALL MATERIALS, EQUIPMENT, FIXTURES, SYSTEMS, AND ACCESSORIES WHICH ARE TO REMAIN IN SERVICE SHALL BE CLEANED, REPAIRED, ADJUSTED AND PLACED INTO PROPER OPERATIONS IN ALL MODES WITH THE ORIGINAL SYSTEM.
6. WHEN TEMPORARY SHORING AND BRACING IS REQUIRED, CONTRACTOR SHALL RETAIN AND PAY FOR THE SERVICES OF A PROFESSIONAL ENGINEER- LICENSED TO PRACTICE IN THE STATE WHERE THE PROJECT IS LOCATED- TO DESIGN AND PREPARE DETAILED DRAWINGS.
7. CONTRACTOR SHALL COORDINATE SCHEDULE OF DEMOLITION WORK WITH THE OVERALL PHASING PLAN. ALL AREAS SURROUNDING EACH PHASE OF DEMOLITION/CONSTRUCTION WILL BE OCCUPIED BY THE OWNER DURING THE OWNER'S NORMAL BUSINESS HOURS. DEMOLITION WORK SHALL NOT ENCUMBER THE USE OF EXISTING ADJACENT SPACES.
8. EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE GENERAL DEMOLITION AND REMODELING WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS IN SERVICE IN ORDER TO PROVIDE FOR THE TIMELY REMOVAL AND/OR RELOCATION OF EQUIPMENT, PIPING, ETC.
9. REMOVE ALL ABANDONED CONDUIT BOXES, CONDUCTORS, TELEPHONE LINES, ELECTRIC PANELS, AND ANY OTHER MISCELLANEOUS EQUIPMENT NOT REQUIRED.
10. REMOVE ALL RECESSED FLOOR BOXES, WALKER DUCTS, FLOOR SINKS, HUB DRAINS, ELECTRICAL RECEPTACLES, ETC. AND FILL VOIDS AS REQUIRED.
11. REMOVE ALL DOOR STOPS AT ASSOCIATED DOORS TO BE DEMOLISHED.
12. NO TOXIC SUBSTANCES HAVE BEEN NOTED ON THE SITE. SHOULD THE CONTRACTOR ENCOUNTER ANY ASBESTOS, ASBESTOS PRODUCTS, PCBs OR OTHER TOXIC SUBSTANCES, THE CONTRACTOR SHOULD REPORT THIS IMMEDIATELY TO THE OWNER IN WRITING PRIOR TO CONTINUING WORK IN THIS AREA. WORK SHALL NOT BE RESUMED EXCEPT BY WRITTEN AUTHORIZATION OR AGREEMENT.
13. ALL CONSTRUCTION DEBRIS AND EXCESS MATERIAL IS TO BE REMOVED BY THE CONTRACTOR AT THE END OF EACH WORK DAY. THE JOB SITE IS TO BE LEFT SUFFICIENTLY CLEAN AS TO WARRANT OWNER'S APPROVAL.
14. REMOVE ALL CEILING SYSTEMS IN THEIR ENTIRETY, INCLUDING TILE, GRID, SUSPENSION WIRING, ANCHORS AND ALL ASSOCIATED APPURTENANCES.
15. PATCH EXISTING PARTITION TO MATCH ADJACENT SURFACES AT REMOVAL OF EXISTING ELECTRICAL DEVICES - REFER TO ELECTRICAL DRAWINGS.

DEMOLITION FLOOR PLAN SYMBOLS LEGEND:

HATCH DENOTES FOOTPINT OF BUILDING TO BE DEMOLISHED

DEMOLITION FLOOR PLAN REFERENCED NOTES:

1. EXISTING 1-STORY FIRE TOWER TO BE DEMOLISHED COMPLETE. REFER TO CIVIL AND STRUCT. FOR FOUNDATION AND STRUCTURAL DEMOLITION EXTENTS AND SCOPE.
2. EXISTING FIRE HYDRANT TO REMAIN. SEE CIVIL.
3. ACCESSORY WOOD FRAME STRUCTURE TO BE DEMOLISHED COMPLETE. SEE CIVIL.
4. EXISTING GRAVEL LANDSCAPING. SEE CIVIL
5. EXISTING UTILITY POLE. REFER TO CIVIL.

FLOOR PLAN SYMBOLS LEGEND:

NOTES:
1. GRAYTONE LINEWORK DENOTES EXISTING CONSTRUCTION TO REMAIN.
2. REFER TO M/E/P/FP/T DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, AND TECHNOLOGY SYSTEMS.

1 / A101 / 1 — ELEVATION VIEW CALLOUT

XX — STRUCTURAL GRIDLINE. SEE STRUC. FOR FOUNDATION LAYOUT, DETAILS AND GENERAL SCOPE.

FLOOR PLAN GENERAL NOTES:

1. REFER TO CIVIL, ELECTRICAL, AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. DURING THE BID PERIOD, EACH BIDDING CONTRACTOR SHALL VISIT THE PROJECT TO REVIEW EXISTING CONDITIONS. CONTRACTOR'S FAILURE TO REASONABLY DETERMINE AND/OR ANTICIPATE THE NATURE OF EXISTING CONDITIONS AND THE WORK THEREBY INVOLVED SHALL NOT BE JUSTIFICATION FOR ADDITIONAL COMPENSATION.
3. CONTRACTOR SHALL VERIFY AND MAINTAIN THE BUILDING'S STRUCTURAL INTEGRITY DURING THE ENTIRE PROJECT DURATION.
4. NOTIFY ARCHITECT OF ANY DISCREPANCIES IN THE DOCUMENTS PRIOR TO COMMENCING WORK.
5. PROVIDE ALL DEMOLITION, TEMPORARY REMOVAL, AND REINSTALLATION AND REPAIR REQUIRED TO INSTALL NEW WORK.
6. DO NOT SCALE DRAWINGS.
7. NOTES ON DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.

FLOOR PLAN REFERENCED NOTES:

REFER TO CIVIL, ELECTRICAL, AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

1. REFER TO CIVIL FOR PROP BUILDING LOCATION ON SITE. SHOWN ON ARCHITECTURAL PLAN FOR REFERENCE ONLY.
2. NEW CONCRETE PAVEMENT. SEE CIVIL.
3. PROPOSED PROP BUILDING / FUTURE MAZE BUILDING BY OTHERS. SEE CIVIL AND STRUCT. FOR WORK INCLUDED IN PROJECT SCOPE.
4. EXTERIOR STAIRCASE. SEE DRAWINGS BY OTHERS.
5. STRUCTURAL DRILLED PIER. SEE STRUC.
6. SLOPED CONCRETE SLAB. SEE CIVIL AND COORDINATE EXACT LOCATION WITH FIRE TOWER (BY OTHERS)

dkA

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McHenry County College
Fire Tower Replacement
8900 Northwest Hwy #14, Crystal Lake, IL 60012
DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026
ISSUED FOR BID - NOT FOR CONTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
DEMOLITION & NEW WORK SITE PLANS

SHEET NUMBER:
A1.10

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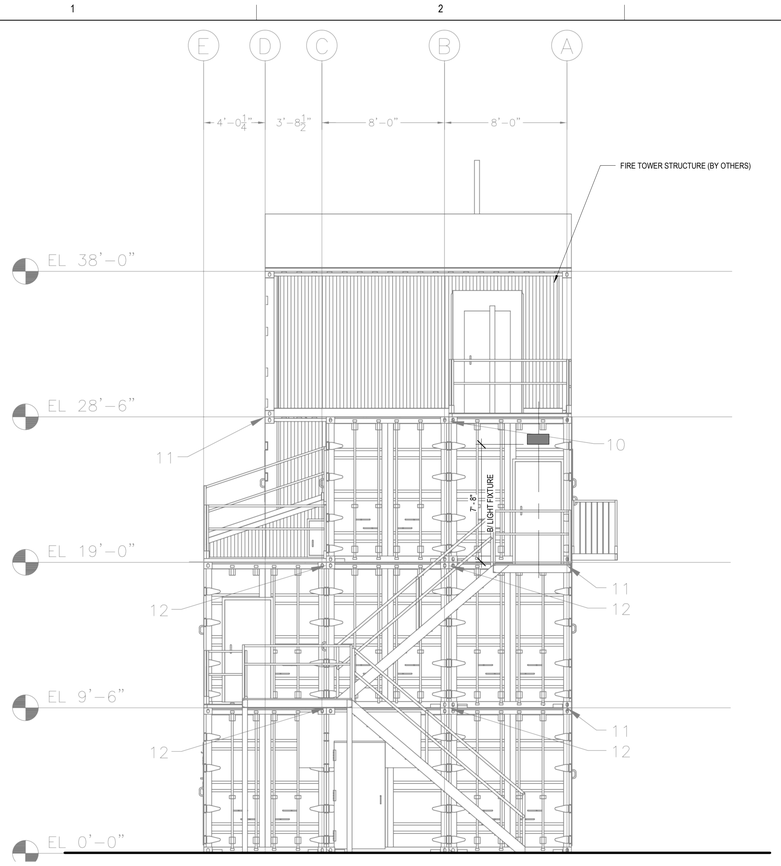
EXTERIOR ELEVATION SYMBOLS LEGEND:

GENERAL ELEVATION NOTES

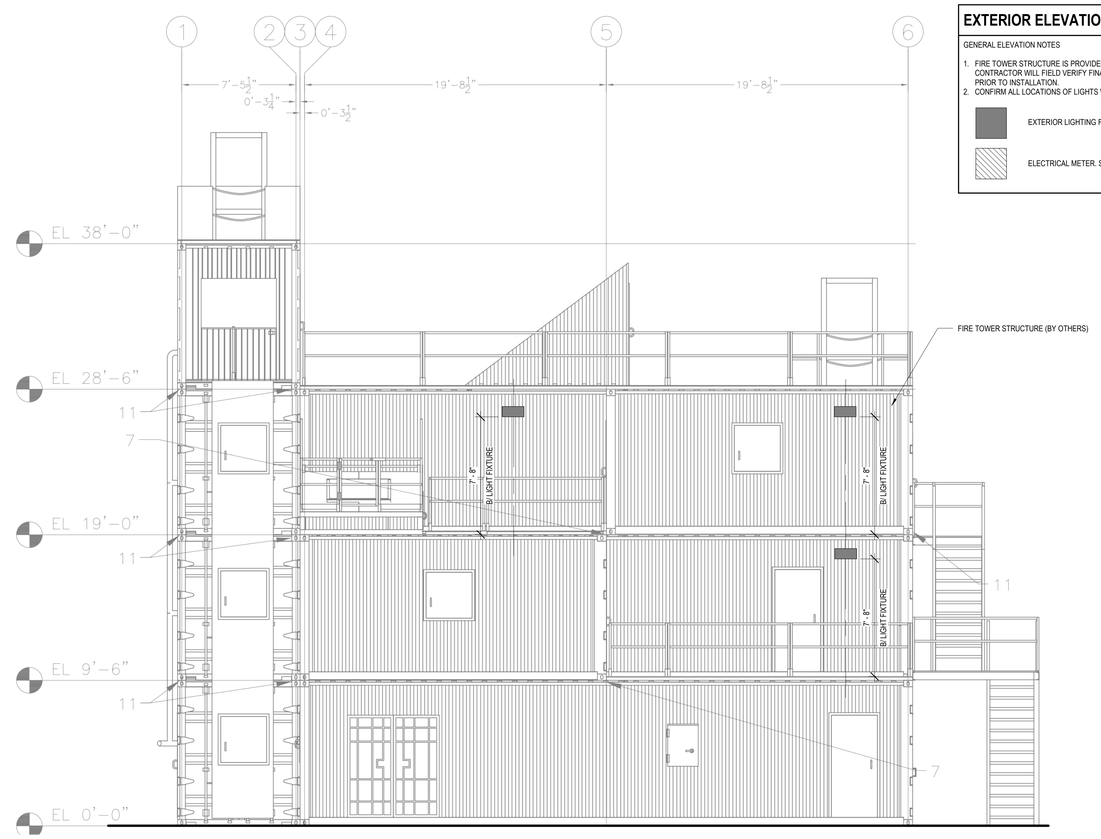
1. FIRE TOWER STRUCTURE IS PROVIDED AND INSTALLED BY OTHERS. ELECTRICAL CONTRACTOR WILL FIELD VERIFY FINAL LAYOUTS WITH FIRE TOWARD CONTRACTOR PRIOR TO INSTALLATION.
2. CONFIRM ALL LOCATIONS OF LIGHTS WITH OWNER PRIOR TO INSTALLATION.

EXTERIOR LIGHTING FIXTURE. SEE ELEC.

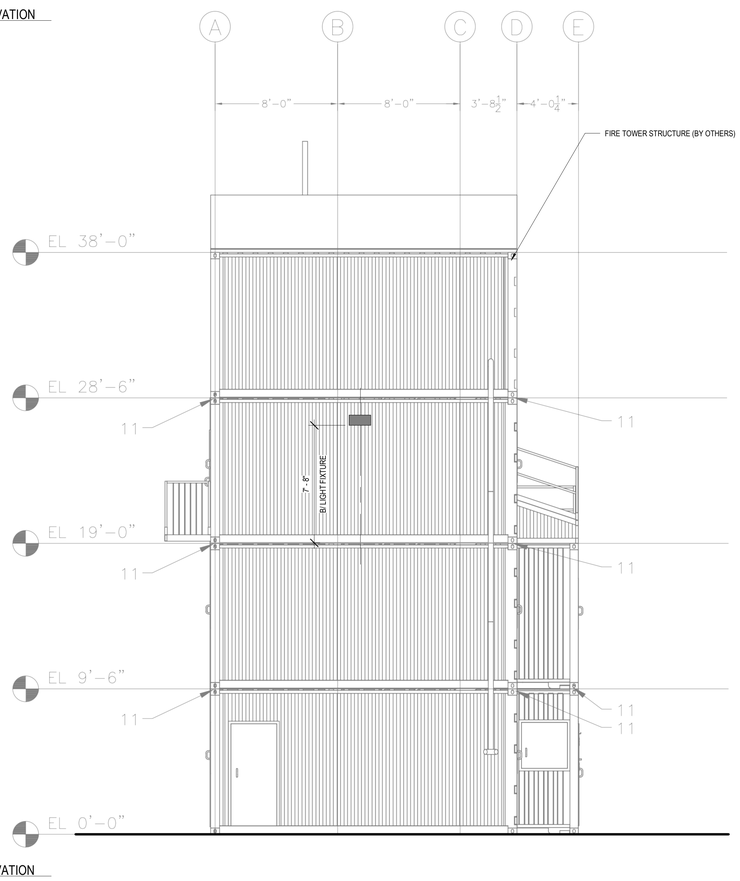
ELECTRICAL METER. SEE ELEC.



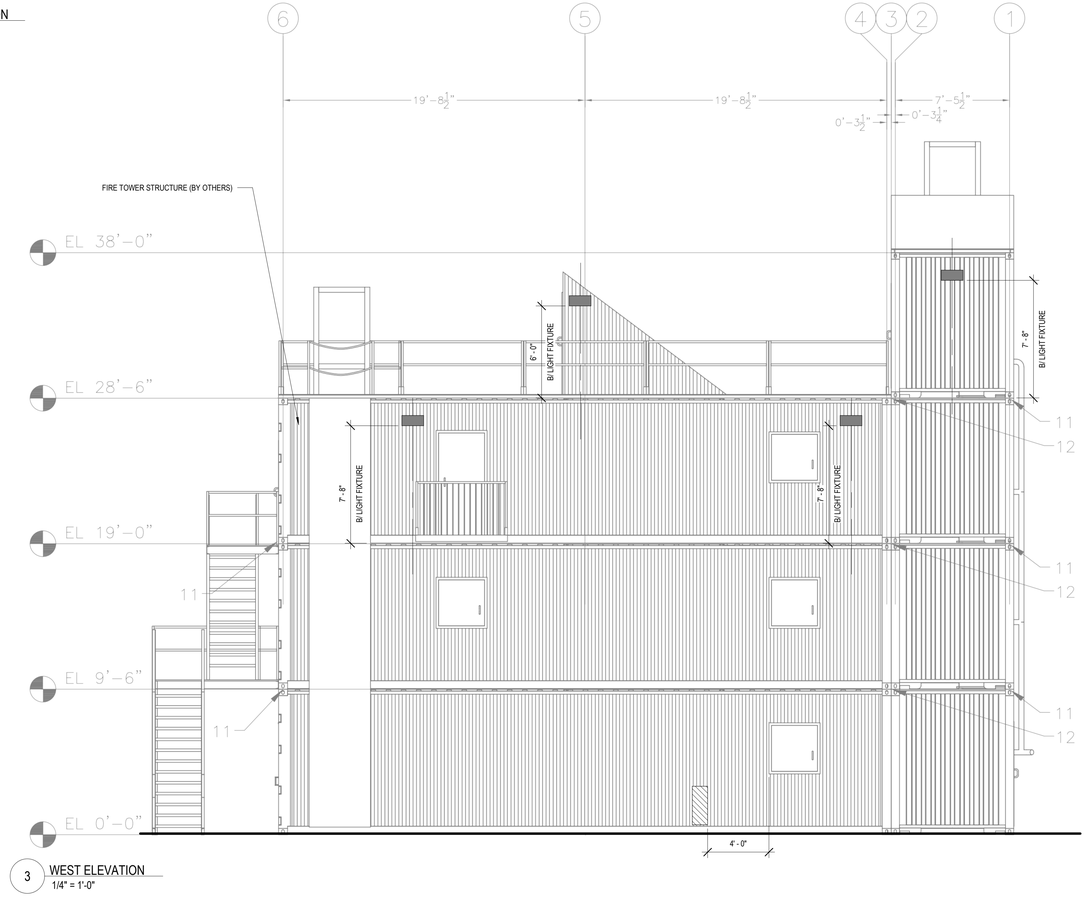
1 NORTH ELEVATION
1/4" = 1'-0"



2 EAST ELEVATION
1/4" = 1'-0"



4 SOUTH ELEVATION
1/4" = 1'-0"



3 WEST ELEVATION
1/4" = 1'-0"

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DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026
ISSUED FOR BID - NOT FOR CONTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
EXTERIOR ELEVATIONS

SHEET NUMBER:
A4.00

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DESIGN CRITERIA

1. STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH 2021 INTERNATIONAL BUILDING CODE AND SUBSEQUENT REFERENCE STANDARDS.
2. RISK CATEGORY: II
3. SEISMIC:

SEISMIC DESIGN CATEGORY	B
IMPORTANCE FACTOR	1.0
SITE CLASS	D
S_S	0.112 g
S_1	0.059 g
S_{DS}	0.12 g
S_{D1}	0.094 g

GENERAL

1. DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES. TEMPORARY BRACING, SHORING, GUYING, ETC. SHALL AVOID EXCESSIVE STRESSES AND HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. THE STRUCTURE SHOULD NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK THAT DEVIATES FROM OR IS PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS, SPECIFICATIONS, OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR THE DESIGN PROFESSIONALS.
3. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALLOWABLE CONSTRUCTION LOADS AND FOR DETERMINING SEQUENCES OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKERS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: FALSEWORK, FORMWORK, STAGING, BRACING, AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
4. ALL DIMENSIONS AND SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOBSITE PRIOR TO BID SUBMITTAL, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
5. STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. SUPPLIER SHALL PROVIDE SIGNED AND SEALED DESIGN CALCULATIONS OR SUITABLE PRODUCT LITERATURE FOR THE COMPONENTS. ALL PRODUCT SUBSTITUTIONS SHALL INCLUDE A CODE EVALUATION REPORT SPECIFIC TO THE BUILDING CODE LISTED IN THE DESIGN CRITERIA.
6. STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW ALL DETAIL DIMENSIONS TO FIT INTRICATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL CONSTRUCT THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DESIGN.
7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
8. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION WITH ARCHITECT.
9. TYPICAL DETAILS SHALL APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
10. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL, AND PLUMBING WITH APPROPRIATE TRADE CONTRACTORS. OPENING SIZES AND LOCATIONS SHOWN FOR DUCTS, PIPE, INSERTS, AND OTHER PENETRATIONS WHEN SHOWN ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED PRIOR TO FORMING.
11. BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, CONTRACTOR SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH FIELD CONDITIONS, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE PROPOSAL SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK.

SUBMITTALS

1. SUBMITTALS ARE:
   a. CONCRETE MIX DESIGNS
   b. MATERIAL PRODUCT DATA FOR STRUCTURAL MATERIALS
   c. CONCRETE REINFORCING
2. SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE DESIGN PROFESSIONALS.
3. SUBMITTALS SHALL BE REVIEWED BY THE DESIGN PROFESSIONALS FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE DESIGN PROFESSIONALS ON THE SHOP DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
4. FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

DELEGATED DESIGN

1. DELEGATED DESIGNS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
2. DELEGATED DESIGNS ARE:
   a. FIRE TRAINING CONTAINER SUPERSTRUCTURE
3. ALL DELEGATED DESIGNS SHALL BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION RESPONSIBLE FOR THE PREPARATION OF THESE DOCUMENTS.

EARTHWORK

1. FOUNDATION DESIGN IS BASED ON GEOTECHNICAL REPORT DATED FEBRUARY 9, 2026 BY MIDLAND STANDARD ENGINEERING & TESTING. FOLLOW RECOMMENDATIONS IN REPORT FOR ALL FOUNDATION WORK. REPORT IS ON FILE WITH THE ARCHITECT.
2. SOIL PROPERTIES:

FROST DEPTH	3'-6" FT

3. SUBGRADE PREPARATION FOR FOOTINGS AND SLABS-ON-GRADE SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND SHALL BE IN COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE GOVERNING AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL DIRECT QUESTIONS REGARDING THE SUBGRADE PREPARATION REQUIREMENTS TO THE GEOTECHNICAL ENGINEER.
4. ANY TESTS, INSPECTIONS, FIELD OBSERVATIONS, OR APPROVAL FROM THE GEOTECHNICAL ENGINEER SHALL BE PERFORMED PRIOR TO PLACEMENT OF CONCRETE. ALTERATIONS TO SITE PREPARATION OR GRADING SHALL BE REPORTED TO THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
5. ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING / BASEMENT WALLS BEFORE CONCRETE HAS ATTAINED SPECIFIED COMPRESSIVE STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL WALLS BELOW GRADE FROM LATERAL LOADS UNTIL SUPPORTING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED 7-DAY STRENGTH MINIMUM. BACKFILLING IS NOT PERMITTED FOR FOUNDATION WALLS UNTIL SUPPORTED SLAB TOP AND BOTTOM ARE IN PLACE OR THE WALL IS ADEQUATELY BRACED TO RESIST LATERAL LOADS.
6. CONTRACTOR SHALL PROVIDE DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUNDWATER, OR SEEPAGE. DETAILS OF GROUNDWATER INFORMATION SHALL BE OBTAINED FROM THE GEOTECHNICAL REPORT. IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION, PROCEDURES SHALL BE IMPLEMENTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
7. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILL MATERIAL OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, AND FOUNDATIONS. IF ANY SUCH MATERIAL OR STRUCTURES ARE FOUND, ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.
8. UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL. BELOW GRADE UTILITY OR PIPE ELEVATIONS, WHERE SHOWN, ARE INDICATED FOR REFERENCE ONLY. REQUIRED ELEVATIONS SHALL BE DETERMINED BY OTHERS AND COORDINATED WITH THE FOUNDATIONS.

SHALLOW FOUNDATIONS

1. SEE THE GEOTECHNICAL REPORT FOR SHALLOW FOUNDATION REQUIREMENTS.
2. SHALLOW FOUNDATIONS SHALL HAVE THE FOLLOWING MINIMUM NET ALLOWABLE SERVICE LOAD BEARING PRESSURES:

SERVICE LOAD BEARING PRESSURES:	
NET ALLOWABLE BEARING PRESSURE	3000 PSF

3. FOUNDATION ELEVATIONS SHOWN INDICATE LOCATIONS WHERE ADEQUATE SOIL BEARING PRESSURE IS ANTICIPATED. IF INADEQUATE BEARING CAPACITY IS ENCOUNTERED, CONTACT STRUCTURAL ENGINEER FOR RESOLUTION. BEARING ELEVATIONS ARE ESTIMATED FROM SOIL BORING DATA INDICATED IN THE GEOTECHNICAL REPORT. DETERMINATION OF FINAL BEARING ELEVATIONS AND FIELD VERIFICATION OF ALLOWABLE BEARING PRESSURE SHALL BE MADE BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO PLACING FOUNDATIONS.
4. ALL FOUNDATIONS SHALL BEAR BELOW THE FROST DEPTH, OR LOWER WHERE INDICATED ON FOUNDATION PLAN. IN CASE OF CONFLICT, NOTIFY THE DESIGN PROFESSIONALS IN ADVANCE OF ANY CONSTRUCTION TO ALLOW FOR ADJUSTMENT.
5. FOUNDATIONS SHALL BE PLACED ON UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL, AND CLEAN AND FREE OF LOOSE DEBRIS AND STANDING WATER AT TIME OF CONCRETE PLACEMENT.
6. WHERE FOUNDATIONS BEAR ON ROCK, FOUNDATIONS SHALL BEAR ON THAT ROCK OR ON LEAN CONCRETE FILL.

DRILLED CONCRETE PIERS

1. SEE THE GEOTECHNICAL REPORT FOR ALL DRILLED PIER REQUIREMENTS.
2. DRILLED PIERS HAVE BEEN DESIGNED FOR THE FOLLOWING NET ALLOWABLE SERVICE LOADS:

END BEARING	3000 PSF AT 923.4'

3. ACTUAL BEARING CAPACITY SHALL BE VERIFIED BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
4. DRILLED PIERS SHALL BE ACCURATELY CENTERED AT THE PROPER LOCATIONS AND INSTALLED PLUMB. INSTALL TO THE FOLLOWING TOLERANCES:

TOP ELEVATION	+1" AND -3"
PLUMB	WITHIN 1%
PIER CENTERLINE	WITHIN 1" FOR 18"Ø OR LESS WITHIN 3" FOR GREATER THAN 18"Ø

5. THE ELEVATION IDENTIFYING THE BOTTOM OF SHAFT IS AN APPROXIMATE ELEVATION TO BE USED FOR ESTIMATING PURPOSES ONLY. THE ACTUAL BOTTOM OF SHAFT ELEVATIONS WILL BE DETERMINED IN THE FIELD BY THE GEOTECHNICAL ENGINEER AND TESTING AND INSPECTION AGENCY.
6. PIERS SHALL BE DRILLED IN PLACE AND FILLED WITH CONCRETE AFTER DATA IS RECORDED, AND APPROVAL OF BEARING SURFACE IS OBTAINED. THE BED AND SHAFT SHALL BE LEVELED AND CLEARED OF LOOSE MATERIAL BEFORE THE CONCRETE IS PLACED. THE SHAFT SHALL BE KEPT FREE OF WATER. EXCAVATIONS SHALL NOT BE LEFT OPEN OVERNIGHT.
7. PLACE CONCRETE CONTINUOUSLY WITHOUT INTERRUPTION, VIBRATING NO LESS THAN THE TOP 5 FEET OF EACH SHAFT.
8. BEARING CAPACITIES SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER AND TESTING AND INSPECTION AGENCY.
9. THE TESTING AND INSPECTION AGENCY AND CONTRACTOR SHALL MAINTAIN A RECORD OR LOG OF EACH DRILLED PIER AS INSTALLED SHOWING LOCATION, TOP AND BOTTOM ELEVATIONS, SHAFT AND BELL DIAMETERS, DATE CONCRETE IS POURED, AND ANY OTHER PERTINENT INFORMATION.
10. NOTIFY THE ARCHITECT IMMEDIATELY IF OBSTRUCTIONS ARE ENCOUNTERED.
11. SPOIL MATERIAL FROM DRILLED PIER INSTALLATION SHALL NOT BE USED AS FILL MATERIAL AND SHALL BE REMOVED FROM WITHIN THE PROJECT PROPERTY LINES AND PROPERLY DISPOSED OF OFFSITE.
12. DRILLED PIER CONTRACTOR TO SUBMIT A DRILLED PIER LOCATION PLAN AND REINFORCING STEEL PLACING DRAWINGS FOR REVIEW PRIOR TO CONSTRUCTION.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", AND ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE", UON.
2. CONCRETE REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS:

REINFORCING STEEL UON	ASTM A615, GR 60	Fy=60 KSI

3. MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:

CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	COVER (IN)
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#6 TO #18	2
		#5 AND SMALLER	1 1/2

4. REINFORCING STEEL SHALL BE INSTALLED TO WITHIN THE FOLLOWING TOLERANCES. INDICATED TOLERANCES ARE PER ACI 117, "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS".

ITEM FOR WHICH TOLERANCE IS BEING MEASURED	PERMITTED TOLERANCE
COVER FOR OTHER REINFORCING STEEL	±3/8"

THE ABOVE LIST OF PERMITTED TOLERANCES SHALL BE PROVIDED ON ALL REINFORCING STEEL PLACING DRAWINGS AND ON ALL POST-TENSIONED TENDON PLACING DRAWINGS. PLACING DRAWINGS THAT DO NOT PROVIDE THIS LIST OF TOLERANCES WILL BE REJECTED.

5. FIELD BENDING OF REINFORCING STEEL IS NOT PERMITTED UON.
6. WELDING OF REINFORCING STEEL OTHER THAN A706 IS PROHIBITED. WELDING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH AWS D1.4 OR D1.8.
7. ALL HOOKS SHALL BE STANDARD HOOKS OR STANDARD STIRRUP HOOKS UON. STANDARD STIRRUP HOOKS SHALL HAVE CONTINUOUS BAR AT INSIDE CORNER OF HOOK.
8. DOWELS SHALL MATCH GRADE, SIZE, SPACING, AND QUANTITY OF LAPPED REINFORCING STEEL UON. EXTEND ALL DOWELS FOR FULL DEPTH OF SUPPORTING ELEMENT AND PROVIDE HOOKS UON. DOWELS SHALL NOT BE POST-INSTALLED INTO FRESH CONCRETE.
9. FIELD CUTTING OF REINFORCING STEEL IS PROHIBITED UNLESS INDICATED ON THE REINFORCING PLACING DRAWINGS.
10. HEATING OF BARS FOR BENDING IS PROHIBITED.
11. REINFORCING STEEL PLACING DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 315. THE PLACING DRAWINGS SHALL SHOW ALL INFORMATION NECESSARY TO FABRICATE AND PLACE THE REINFORCING STEEL.
12. REINFORCING STEEL SPACINGS ARE CENTER-TO-CENTER DIMENSIONS UON. REINFORCING STEEL SHOWN IN SECTION PERPENDICULAR TO THE CUT ARE CONTINUOUS UON.
13. THE SPACING OF ALL REINFORCING STEEL MUST BE COMPUTED BY THE REINFORCING STEEL DETAILER AND MUST BE INDICATED ON THE PLACING DRAWINGS. EXTENT ARROWS MUST BE USED TO CLEARLY INDICATE THE LOCATIONS WHERE GROUPS OF REINFORCING BARS ARE TO BE INSTALLED.
14. A LIST OF ALL APPLICABLE REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE INDICATED ON ALL REINFORCING STEEL PLACING DRAWINGS. PLACING DRAWINGS THAT DO NOT SHOW SUFFICIENT INFORMATION NEEDED TO PLACE THE REINFORCING STEEL WILL BE REJECTED.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AND ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE UON.
2. CONCRETE MATERIALS SHALL CONFORM TO:

PORTLAND LIMESTONE CEMENT	ASTM C595, TYPE IL
FLY ASH	ASTM C618, TYPE C OR F
SLAG CEMENT	ASTM C989
FINE AND COARSE AGGREGATE	ASTM C33
LIGHTWEIGHT AGGREGATE	ASTM C330
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C260
WATER REDUCING ADMIXTURE	ASTM C494

3. CONCRETE STRENGTHS SHALL CONFORM TO:

COMPONENT	f'c AT 28 DAYS[1] (PSI)	MAX PERMITTED W/C	EXPOSURE CLASS
SHALLOW FOUNDATIONS	4500	0.45	F2, S0, W0, C0
DRILLED PIERS	3000	0.60	F0, S0, W0, C0

1. IF ALTERNATE VALUES ARE INDICATED ON PLANS OR DETAILS FOR SPECIFIC CONDITIONS. THEY SHALL BE USED IN LIEU OF THOSE LISTED IN THE TABLE.

4. AIR ENTRAINMENT:

NOMINAL MAXIMUM AGGREGATE SIZE	REQUIRED AIR CONTENT PER EXPOSURE CATEGORY		
	F0	F1	F2/F3
3/8"	N/A	6%	7.5%
1/2"	N/A	5.5%	7%
3/4"	N/A	5%	6%
1"	N/A	4.5%	6%

   a. CONCRETE SHALL BE AIR ENTRAINED WITH THE APPROPRIATE PERCENTAGE AIR CONTENT LISTED IN THE TABLE ABOVE AS APPLICABLE FOR THE INDICATED EXPOSURE CLASS AND NOMINAL MAXIMUM AGGREGATE SIZE IN THE CONCRETE MIX. THE REQUIRED AIR CONTENT VALUE MAY BE REDUCED BY 1% FOR ALL CONCRETE WITH COMPRESSIVE STRENGTH GREATER THAN 5000 PSI. THE PERMITTED TOLERANCE ON THE REQUIRED AIR CONTENT IS ±1.5%.

5. REQUIRED NOMINAL MAXIMUM COARSE AGGREGATE SIZE:

CONCRETE ELEMENT	REQUIRED NOMINAL MAXIMUM COARSE AGGREGATE SIZE*
ALL CONCRETE UON	1"

* SMALLER NOMINAL MAXIMUM COARSE AGGREGATE SIZE SHALL BE USED WHERE REQUIRED PER ACI 318.

6. ALL FOUNDATION ELEMENTS SHALL BE CENTERED UNDER WALLS, PIERS, OR COLUMNS UON.
7. "ROUGH JOINTS" ARE JOINTS ROUGHENED TO AN AMPLITUDE OF 1/4" AND FREE AND CLEAN OF LAITANCE. PROVIDE ROUGH JOINTS AT ALL CONSTRUCTION JOINTS UON.
8. CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS OF ALL CONSTRUCTION JOINTS WHERE JOINTS ARE NOT INDICATED ON THE DRAWINGS.
9. CONSTRUCTION JOINTS IN CAST-IN-PLACE CONCRETE SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF SPAN. PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SHOWN ON REINFORCING STEEL PLACING DRAWINGS. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS UON. ALL REINFORCING TO BE CONTINUOUS THROUGH JOINTS UON.
10. HORIZONTAL CONSTRUCTION JOINTS THROUGH CAST-IN-PLACE CONCRETE FRAMING ARE NOT PERMITTED EXCEPT WHERE SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS.
11. NOTIFY THE ARCHITECT 48 HOURS MINIMUM PRIOR TO ALL POURS.
12. CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.
13. ADHERE TO ACI 305R AND ACI 306R FOR HOT AND COLD WEATHER CONCRETE CONSTRUCTION.
14. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE TESTING AND INSPECTION AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE APPLICABLE CODE. MIX DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.
15. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, LOCATIONS, AND DETAILS OF ALL ARCHITECTURAL FEATURES IN THE CONCRETE. SEE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR ALL CONCRETE FINISHES.

GENERAL

1. THE STRUCTURAL ENGINEER DOES NOT PROVIDE INSPECTIONS OF CONSTRUCTION. STRUCTURAL ENGINEER MAY MAKE PERIODIC OBSERVATIONS OF THE CONSTRUCTION. SUCH OBSERVATIONS SHALL NOT REPLACE REQUIRED INSPECTIONS BY THE GOVERNING AUTHORITIES OR SERVE AS "SPECIAL INSPECTIONS" AS MAY BE REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
2. SEE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS OR SPECIFICATIONS FOR TESTING AND INSPECTION REQUIREMENTS OF NON-STRUCTURAL COMPONENTS.
3. DUTIES OF THE INSPECTION AGENCY PER IBC CHAPTER 17:
   a. SUBMIT A PROPOSED TESTING AND INSPECTION PROGRAM TO THE OWNER, THE ARCHITECT AND THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.
   b. PERFORM ALL TESTING AND INSPECTION REQUIRED PER APPROVED TESTING AND INSPECTION PROGRAM.
   c. FURNISH INSPECTION REPORT TO THE BUILDING OFFICIAL, THE OWNER, THE ARCHITECT, STRUCTURAL ENGINEER AND THE GENERAL CONTRACTOR. THE REPORTS SHALL BE COMPLETED AND FURNISHED WITHIN 48 HOURS OF INSPECTED WORK.
   d. SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTION AGENCY'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
4. SPECIAL INSPECTIONS AND TESTS ARE REQUIRED FOR MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN CHAPTER 17 OF THE IBC OR IN STANDARDS REFERENCED BY THE IBC. THESE ITEMS INCLUDE:
   a. POST-INSTALLED ANCHORS - INSPECTION
5. THE FOLLOWING WORK SHALL BE INSPECTED BY THE SPECIAL INSPECTOR UNLESS SPECIFICALLY WAIVED BY THE BUILDING OFFICIAL.

CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
INSPECT REINFORCEMENT, AND VERIFY PLACEMENT	-	X	ACI 318: CH 20, 25.2, 25.3, 26.6.1-26.6.3	-
INSPECT ANCHORS CAST IN CONCRETE	-	X	ACI 318: 17.8.2	-
VERIFY USE OF REQUIRED DESIGN MIX	-	X	ACI 318: CH 19, 26.4.3, 26.4.4	1904.1, 1904.2
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X	-	ASTM C172, ASTM C31, ACI 318: 26.5, 26.12	-
INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	-	ACI 318: 26.5	-
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	X	ACI 318: 26.5.3-26.5.5	-
INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	-	X	ACI 318: 26.11.1.2(b)	-

SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	-	X
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	-	X
PERFORM CLASSIFICATIONS AND TESTING OF COMPACTED FILL MATERIAL	-	X
DURING FILL PLACEMENT, VERIFY USE OF PROPER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	-	X

CAST-IN-PLACE DEEP FOUNDATION ELEMENTS

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
INSPECT DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	X	-
VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS (IF APPLICABLE), LENGTHS, EMBEDMENT INTO BEDROCK (IF APPLICABLE), AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CONCRETE OR GROUT VOLUMES	X	-
FOR CONCRETE ELEMENTS, PERFORM TESTS AND ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.3	-	-

FOUNDATION SYMBOLS:

SYMBOL	DESCRIPTION	DETAIL REFERENCE
	SLAB DEPRESSION	
S	STEP IN FOOTING	

CONCRETE SYMBOLS:

SYMBOL	DESCRIPTION	DETAIL REFERENCE
RAMP UP	RAMP (DIRECTION)	N/A
	RAMP DOWN	
	RAMP UP	
	SLAB CURB WALL	
	SLAB DROP	
	SLAB FOLD	
	SLAB THICKNESS CHANGE	
	SLAB/BEAM	
	SLOPING SLAB DROP	

STRUCTURAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
(E)	EXISTING
ADDL	ADDITIONAL
B.O.	BOTTOM OF
BF	BRACED FRAME
BN	BOUNDARY NAILING
BOT	BOTTOM
BTWN	BETWEEN
CFS	COLD FORM STEEL
CGS	CENTER OF GRAVITY OF THE TENDON
CJP	COMPLETE JOINT PENETRATION WELD
CLR	CLEAR
CL	CENTERLINE
CONN	CONNECTION
CONST	CONSTRUCTION
DBA	DEFORMED BAR ANCHOR
DL	DEAD LOAD
EA	EACH
EF	EACH FACE
EL	ELEVATION
E.N.	EDGE NAILING
EOD	EDGE OF DECK
EOS	EDGE OF SLAB
EW	EACH WAY
EXT	EXTERIOR
FN	FIELD NAILING
GA	GAGE OR GAUGE
GL	GLULAM
GT	GIRDER TRUSS
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHOR
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG.	LONGITUDINAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
NTS	NOT TO SCALE
OPP	OPPOSITE, OPPOSITE HAND
PAF	POWDER ACTUATED FASTENER
PJP	PARTIAL JOINT PENETRATION WELD
PL	PLATE
REQD	REQUIRED
SC	SLIP CRITICAL
SFRS	SEISMIC FORCE-RESISTING SYSTEM
SIM	SIMILAR
SL	SNOW LOAD
SP	SPACE(S)
SQ	SQUARE
T&B	TOP AND BOTTOM
T.O.	TOP OF
TC	PRE-TENSIONED BOLT
TRANS	TRANSVERSE
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
w/	WITH
WP	WORK POINT
WWR	WELDED WIRE REINFORCING

STRUCTURAL SHEET INDEX

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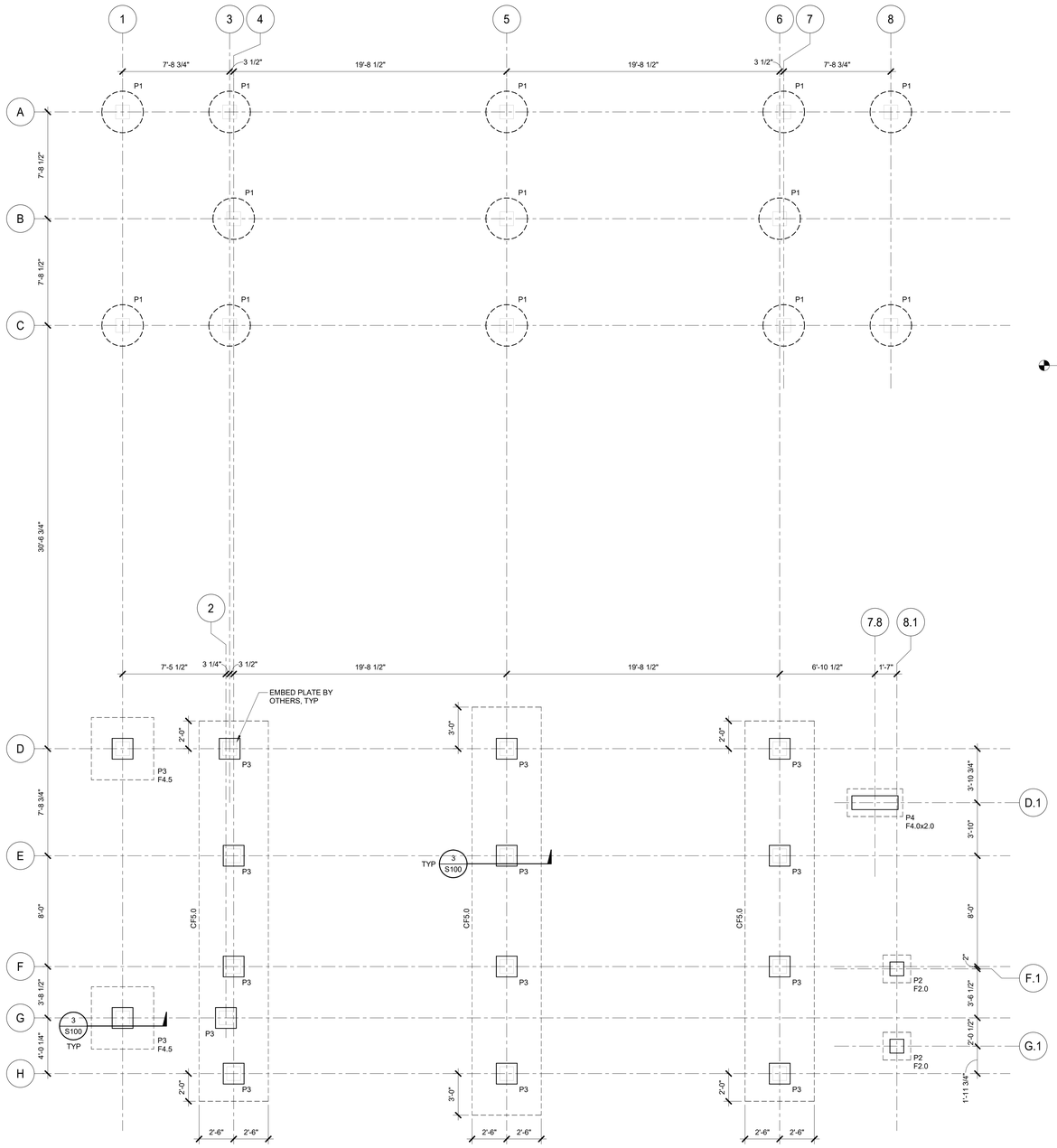
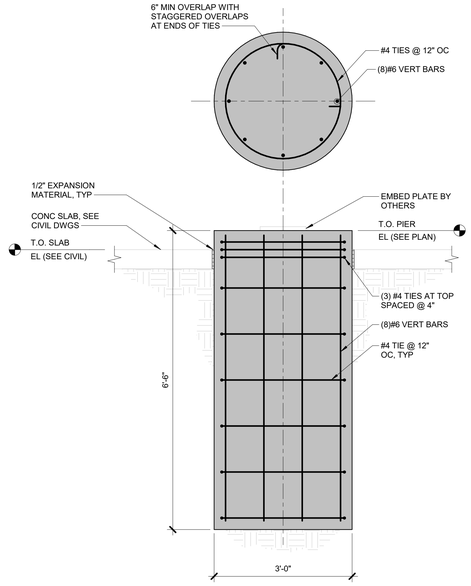
GENERAL FOUNDATION SHEET NOTES:

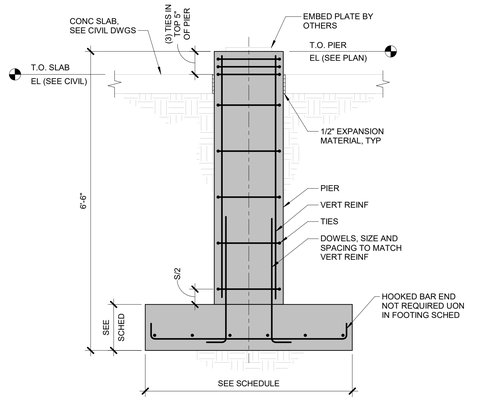
1. TOP OF PIER ELEVATION OF (929.57') BASED ON CIVIL DRAWINGS. COORDINATE WITH CIVIL DRAWINGS.
2. SEE GENERAL NOTES SECTIONS FOR ADDITIONAL INFORMATION.
3. CONTRACTOR VERIFY ALL DIMENSIONS WITH ARCH DRAWINGS.



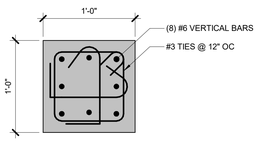
1 FOUNDATION PLAN
1/4" = 1'-0"



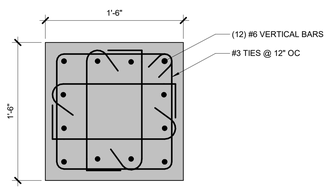
2 DRILLED PIER (P1)
3/4" = 1'-0"



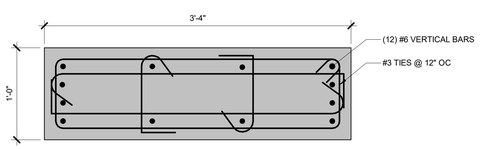
3 SPREAD/CONTINUOUS FOOTING WITH PIER
3/4" = 1'-0"



4 PIER (P2)
1 1/2" = 1'-0"



5 PIER (P3)
1 1/2" = 1'-0"



6 PIER (P4)
1 1/2" = 1'-0"

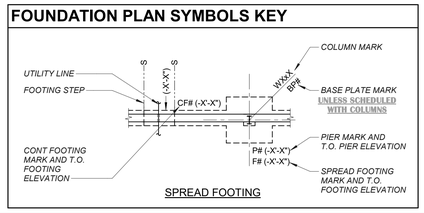
SPREAD FOOTING SCHEDULE

MARK	LENGTH	WIDTH	DEPTH	REINFORCEMENT (EW BOT, UON)	REMARKS
F2.0	2'-0"	2'-0"	1'-0"	(3)#6	
F4.0x2.0	4'-0"	2'-0"	1'-0"	(4)#6 SHORT, (3)#6 LONG	
F4.5	4'-6"	4'-6"	1'-0"	(5)#6	

CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	DEPTH	REINFORCING (BOT, UON) LONG	SHORT	REMARKS
CF5.0	5'-0"	1'-0"	(6)#6	#6 @ 12" OC	

FOUNDATION PLAN SYMBOLS KEY



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McHenry County College

Fire Tower Replacement

8900 Northwest Hwy #14, Crystal Lake, IL 60012

DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

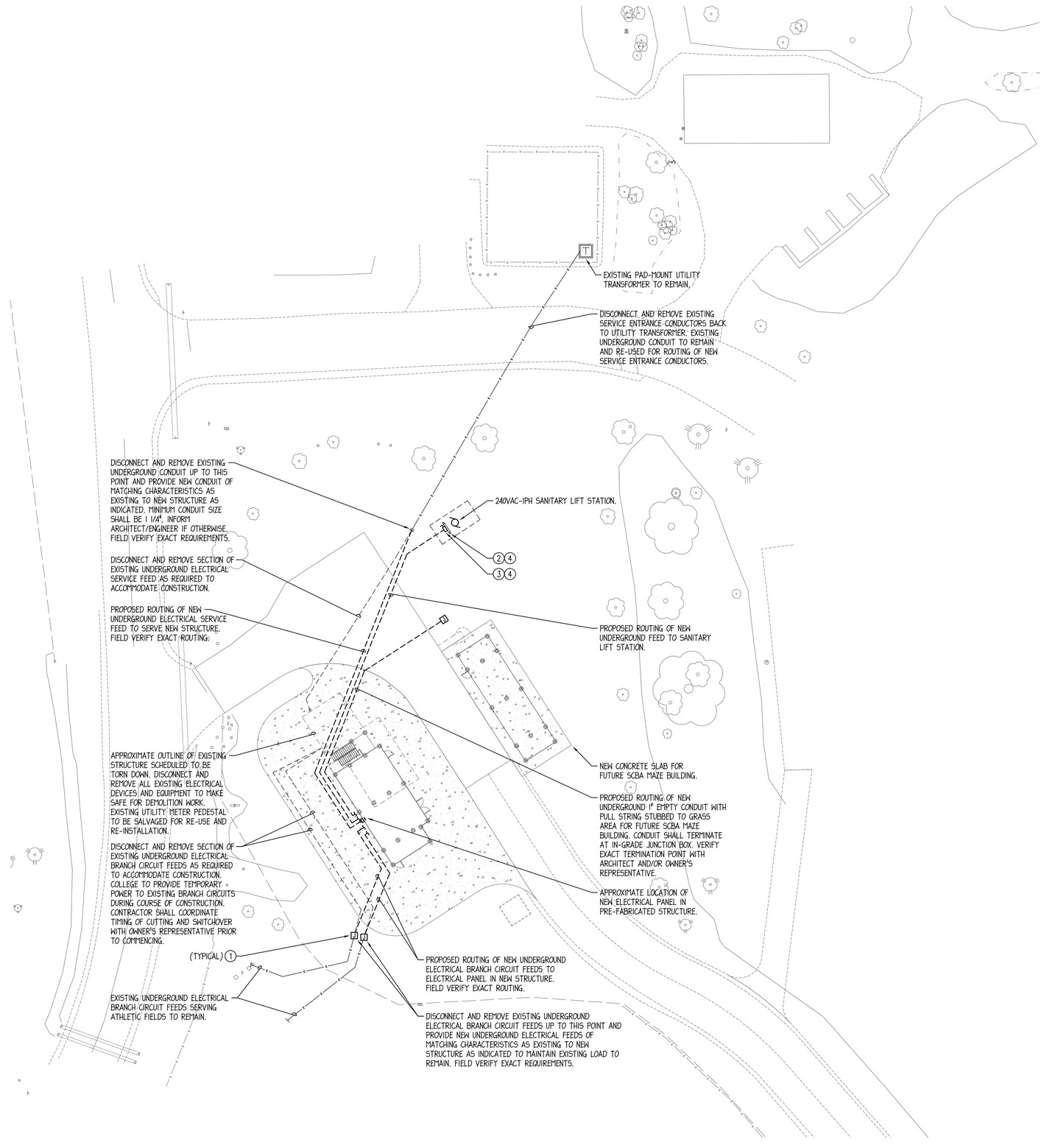
SHEET TITLE:
FOUNDATION PLAN AND DETAILS

SHEET NUMBER:
S100

4/21/2026 7:26:59 AM

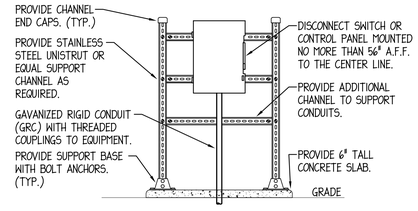
DRAWING NOTES: (TYPICAL FOR THIS DRAWING ONLY.)

1. PROVIDE 12"L X 12"W X 12"D UL LISTED, POLYMER CONCRETE, OPEN BOTTOM, IN-GRADE JUNCTION BOX AS MANUFACTURED BY HUBBELL QUAZITE #PC1212BA12 OR APPROVED EQUAL. INCLUDE GASKETED COVER WITH "ELECTRIC" LOGO AND STAINLESS STEEL TAMPER PROOF FASTENERS TO SECURE COVER TO BOX. LOCATE JUNCTION BOX IN GRASS AREA. FIELD VERIFY EXACT LOCATION.
2. 240VAC-1PH LIFT STATION CONTROL PANEL, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR. PROVIDE PROPERLY SIZED AND SEALED UNDERGROUND CONDUITS FROM THE CONTROL PANEL DOWN TO PUMP BASIN - SIZED FOR PUMP POWER CORDS, SENSOR CORDS, AND FLOAT SWITCH CORDS. ALL FINAL WIRE TERMINATIONS FROM THE PUMPS AND FLOATS TO THE CONTROL PANEL SHALL BE DONE BY THE CONTRACTOR. COORDINATE INSTALLATION WITH OTHER TRADES.
3. PROVIDE 240VAC, 2-POLE, 30AMP RATED HEAVY DUTY NON-FUSIBLE DISCONNECT SWITCH IN NEMA 3R ENCLOSURE. FIELD COORDINATE EXACT LOCATION TO MAINTAIN 3-FOOT WORKING SPACE IN FRONT OF ELECTRICAL EQUIPMENT.
4. EQUIPMENT SHALL BE MOUNTED ON UNISTRUT STAINLESS-STEEL FRAMING SYSTEM ON 6" TALL CONCRETE SLAB. REFER TO DETAIL ON THIS SHEET FOR ADDITIONAL INFORMATION.



1 SITE ELECTRICAL PLAN
1" = 20'-0"

N
TRUE NORTH



FREE-STANDING EQUIPMENT DETAIL

NO SCALE

NOTES:
1. INCLUDE BRACING HARDWARE FOR STABILITY WHERE REQUIRED.

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P: 312.496.0000

STRUCTURAL ENGINEER:
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CIVIL ENGINEER:
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MCHENRY, IL, 60050
P: 815.385.1778

ELECTRICAL ENGINEER:
20/10 ENGINEERING
1216 TOWER ROAD,
SCHAUMBURG, IL 60173
P: 847.882.2010

McHenry County College

Fire Tower Replacement

8900 Northwest Hwy #14, Crystal Lake, IL 60012

DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026

ISSUED FOR BID - NOT FOR CONSTRUCTION

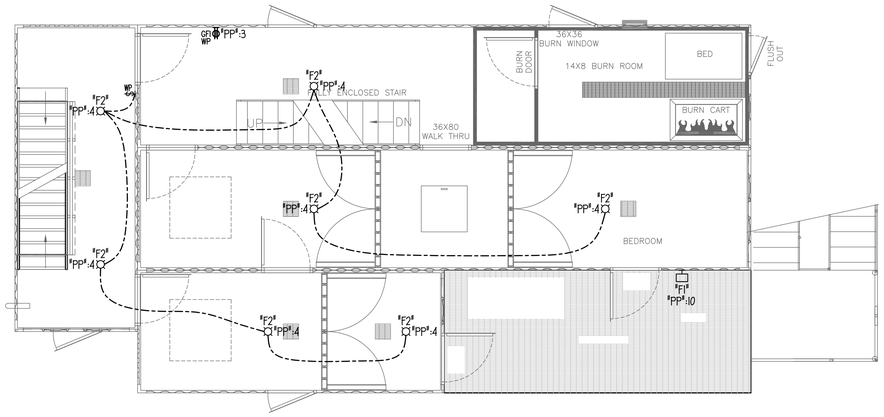
NO:	DESCRIPTION:	DATE:

SHEET TITLE:

SITE ELECTRICAL PLAN

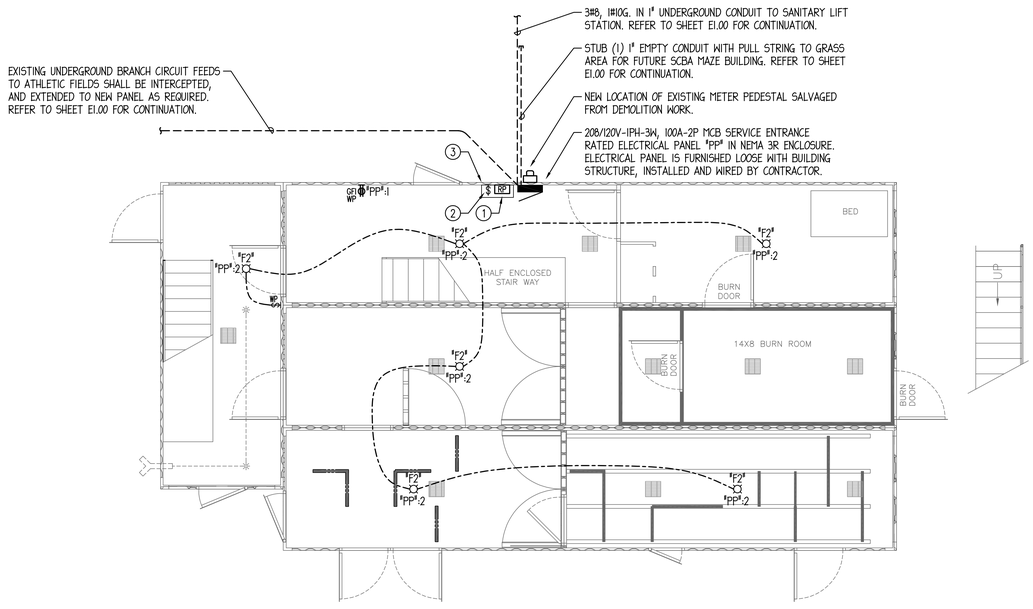
SHEET NUMBER:

E1.00



2 SECOND FLOOR ELECTRICAL PLAN
1/4" = 1'-0"

TRUE NORTH



1 FIRST FLOOR ELECTRICAL PLAN
1/4" = 1'-0"

TRUE NORTH

DRAWING NOTES: (TYPICAL FOR THIS DRAWING ONLY.)

1. PROVIDE RELAY PANEL WITH (4) RELAYS TO CONTROL EXTERIOR LIGHTING CIRCUITS. RELAY PANEL SHALL BE ACUITY NLIGHT #ARP-INTENCOB-NLT-8FCR-MVOLT-IVB-HLK-SM-DTC OR APPROVED EQUAL WITH #ARPA-APS-OL PHOTOSENSOR. LOCATE PHOTOSENSOR ON ROOF FACING NORTH. COORDINATE FINAL PHOTOSENSOR LOCATION WITH ARCHITECT.
2. PROVIDE ON/OFF OVERRIDE SWITCH TO CONTROL EXTERIOR LIGHTING BRANCH CIRCUIT AS MANUFACTURED BY ACUITY nLIGHT #nPODM1A-WH OR APPROVED EQUAL.
3. RELAY PANEL AND LOW VOLTAGE CONTROL SWITCH SHALL BE MOUNTED INSIDE A NEMA 3R, GASKETED METAL ENCLOSURE WITH HINGED COVER AND PADLOCK PULL CATCH LATCHES AS MANUFACTURED BY nVENT HOFFMAN OR EQUAL. EXACT ENCLOSURE SIZE TO BE DETERMINED BY CONTRACTOR.

GENERAL NOTES:

1. CONDUCTORS SHALL BE ROUTED IN GALVANIZED RIGID CONDUIT (GRC) WITH THREADED CONNECTIONS THAT IS SUITABLE FOR USE IN WET LOCATIONS.
2. CONDUIT CLAMPS, HANGERS, BRACKETS, SUPPORT CHANNELS SHALL BE GALVANIZED THAT IS SUITABLE FOR USE IN WET LOCATIONS.
3. JUNCTION BOXES SHALL BE DIE-CAST ALUMINUM WITH THREADED KNOCKOUTS THAT IS SUITABLE FOR USE IN WET LOCATIONS.
4. PVC MATERIAL FOR CONDUITS AND JUNCTION BOXES WILL NOT BE PERMITTED.
5. EXPOSED CONDUITS SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO WALLS AND CEILINGS FOR NEATNESS AND APPEARANCE. CONTRACTOR SHALL COORDINATE EXACT ROUTING AND INSTALLATION REQUIREMENTS IN FIELD WITH PRE-FABRICATED STRUCTURE SUPPLIER.

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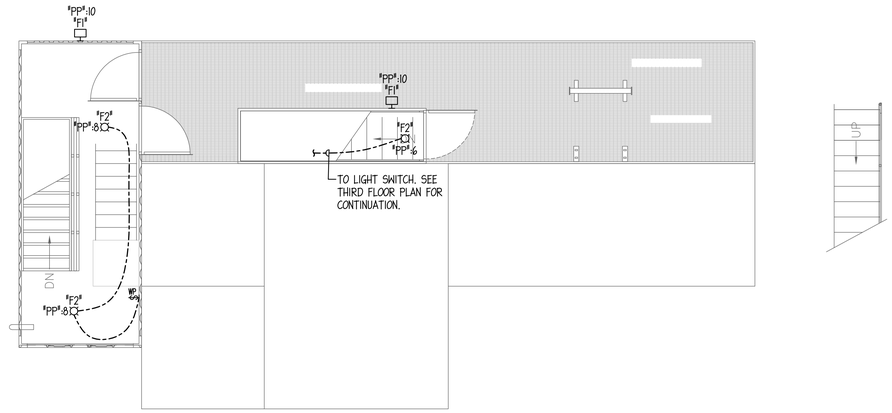
ELECTRICAL PLANS

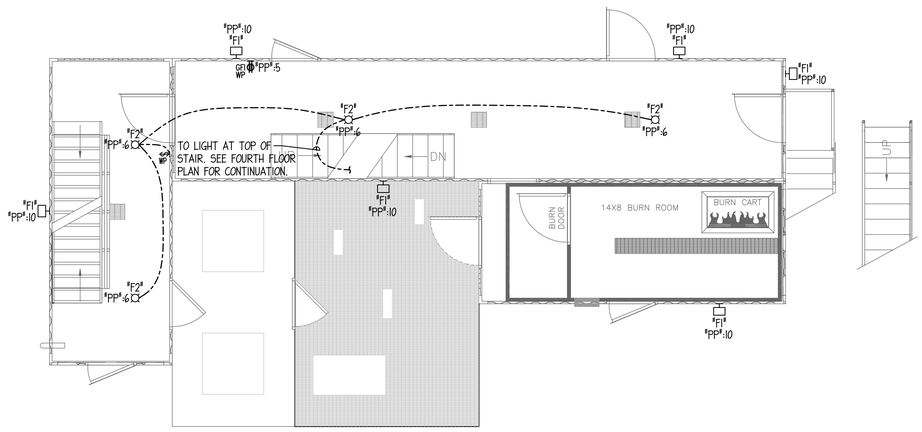
SHEET NUMBER:

E1.10



2 FOURTH FLOOR ELECTRICAL PLAN
1/4" = 1'-0"

TRUE NORTH



1 THIRD FLOOR ELECTRICAL PLAN
1/4" = 1'-0"

TRUE NORTH

GENERAL NOTES:

1. CONDUCTORS SHALL BE ROUTED IN GALVANIZED RIGID CONDUIT (GRC) WITH THREADED CONNECTIONS THAT IS SUITABLE FOR USE IN WET LOCATIONS.
2. CONDUIT CLAMPS, HANGERS, BRACKETS, SUPPORT CHANNELS SHALL BE GALVANIZED THAT IS SUITABLE FOR USE IN WET LOCATIONS.
3. JUNCTION BOXES SHALL BE DIE-CAST ALUMINUM WITH THREADED KNOCKOUTS THAT IS SUITABLE FOR USE IN WET LOCATIONS.
4. PVC MATERIAL FOR CONDUITS AND JUNCTION BOXES WILL NOT BE PERMITTED.
5. EXPOSED CONDUITS SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO WALLS AND CEILINGS FOR NEATNESS AND APPEARANCE. CONTRACTOR SHALL COORDINATE EXACT ROUTING AND INSTALLATION REQUIREMENTS IN FIELD WITH PRE-FABRICATED STRUCTURE SUPPLIER.

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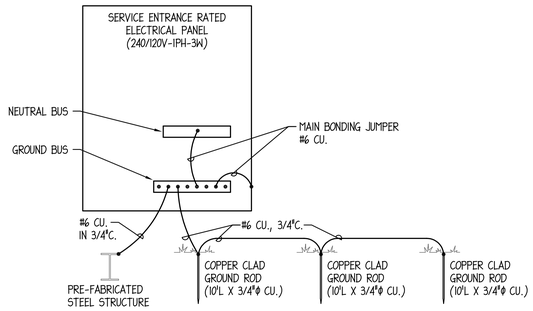
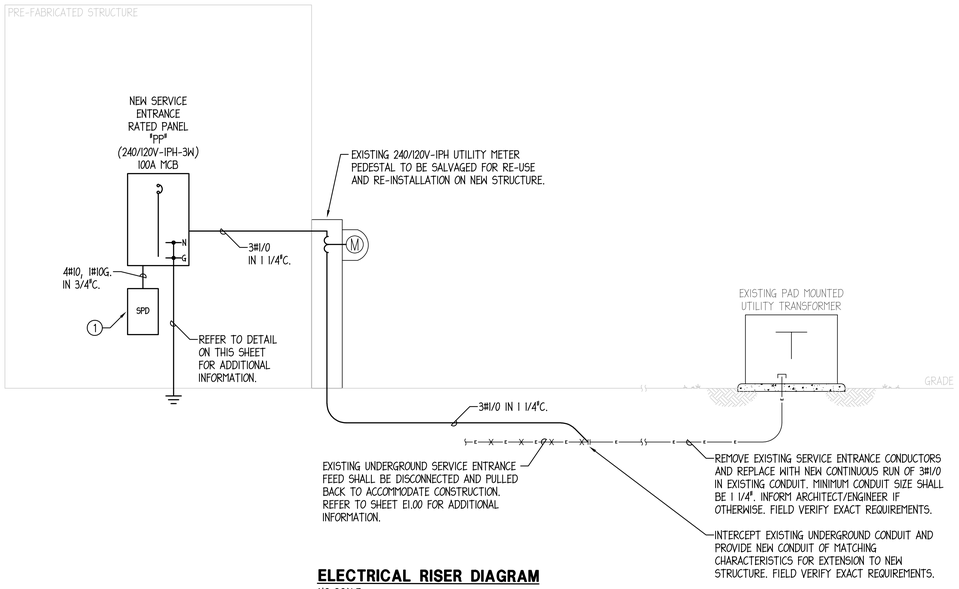
E1.20



GROUNDING DETAIL (⏚)

NO SCALE



ELECTRICAL RISER DIAGRAM

NO SCALE

NOTES:
1. ELECTRICAL RISER DIAGRAM IS SHOWN FOR REFERENCE ONLY.
2. REFER TO PLANS FOR LOCATIONS OF EQUIPMENT.

LEGEND:

- DENOTES DEMOLITION.
- DENOTES EXISTING TO REMAIN AND/OR BE REUSED.
- DENOTES NEW.

EXISTING CONDITIONS WERE OBTAINED FROM EXISTING AS-BUILT DRAWINGS AND CURSORY FIELD OBSERVATION. THIS CONTRACTOR SHALL IDENTIFY ANY DISCREPANCIES IN THE FIELD AND REPORT THEM TO THE ENGINEER.

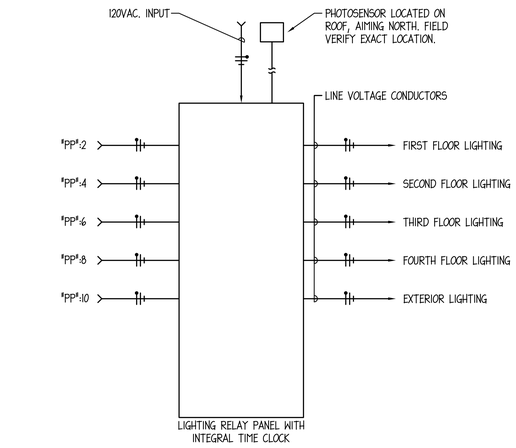
INCLUDE COSTS IN BID PROPOSAL TO LOCATE AND MARK EXISTING UNDERGROUND UTILITIES WHERE NEW UNDERGROUND WORK IS INDICATED. PRIOR TO ANY CONSTRUCTION ACTIVITIES, FOR LOCATION OF UTILITIES, CALL J.U.L.I.E. AT 1-800-892-0123.

GENERAL NOTES:

1. WORK WORK SHALL COMPLY WITH THE 2017 NATIONAL ELECTRICAL CODE WITH CITY OF CRYSTAL LAKE AMENDMENTS AND SHALL CONFORM TO MCHENRY COUNTY COLLEGE STANDARDS.
2. RISER DIAGRAM IS DIAGRAMMATIC ONLY. COORDINATE EXACT ROUTING OF FEEDERS IN FIELD. PROVIDE PULLBOXES AS REQUIRED PER NEC REQUIREMENTS.
3. ALL ELECTRICAL EQUIPMENT SHOWN IS NEW UNLESS NOTED OTHERWISE.
4. PROVIDE 4" HOUSEKEEPING CONCRETE PAD FOR ALL FLOOR MOUNTED EQUIPMENT.
5. ALL PENETRATIONS THROUGH BUILDING SHALL BE SEALED WATER TIGHT PER ARCHITECT'S REQUIREMENTS.

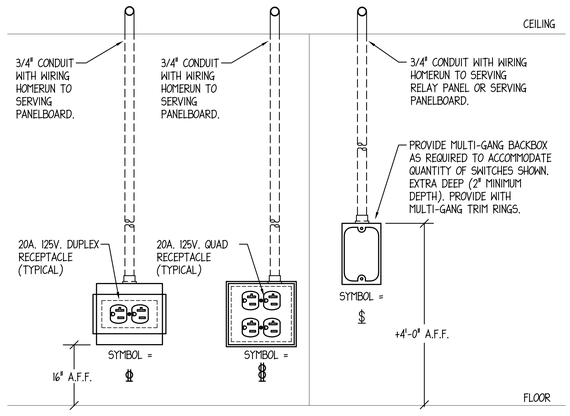
DRAWING NOTES: (TYPICAL FOR THIS DRAWING ONLY.)

(1) PROVIDE 240/120V, 1-PHASE, 3-WIRE, 80KA SURGE PROTECTIVE DEVICE AS MANUFACTURED BY SQUARE-D #HEPD80 OR APPROVED EQUAL.



LIGHTING CONTROL RELAY PANEL SCHEMATIC DIAGRAM

NO SCALE



JUNCTION BOX ROUGH-IN DETAIL

NO SCALE

NOTES:
1. DETAILS ARE FOR REFERENCE ONLY.
2. NOT ALL DEVICES ARE REQUIRED FOR THIS PROJECT.
3. PROVIDE TWO GANG BACKBOXES (2" MINIMUM DEPTH) WITH ALL RECEPTACLE OUTLETS.

PANEL SCHEDULE: "PP" — LOCATION: BUILDING — C.B. RATING: VIF k.A.I.C.

VOLT: 240/120V-1PH-3W — MAINS: 100A MCB — MOUNTING: SURFACE — TYPE: VIF

REMARKS: NEW ELECTRICAL PANEL FURNISHED WITH PRE-FABRICATED BUILDING, WIRED BY THIS CONTRACTOR.

	USE AND/OR AREA SERVED	C/B	CIR. NO.	V.A. øA	V.A. øB	CIR. NO.	C/B	USE AND/OR AREA SERVED	
☐	R: FIRST FLOOR	20/1	1	180		2	20/1	L: FIRST FLOOR	☐ △
☐	R: SECOND FLOOR	20/1	3		180	4	20/1	L: SECOND FLOOR	☐ △
☐	R: THIRD FLOOR	20/1	5	180		6	20/1	L: THIRD FLOOR	☐ △
☐	M: LIFT STATION	30/2	7		960	8	20/1	L: FOURTH FLOOR	☐ △
			9	960		10	20/1	L: EXTERIOR	☐ △
☐	SPARE	20/1	11		-	12	20/1	SPARE	☐
☐	SPARE	20/1	13	-		14	20/1	SPARE	☐
☐	SPARE	20/1	15		-	16	20/1	SPARE	☐
☐	SPARE	20/1	17	-		18	20/1	SPARE	☐
☐	SPARE	20/1	19		-	20	20/1	SPARE	☐
☐	SPD	30/2	21	-		22	20/1	SPARE	☐
			23		-	24	20/1	SPARE	☐
	TOTAL CONNECTED LOAD PER PHASE:			1320	1140	TOTAL V.A. = 2,460		10.25 AMPS	

☐ - BRANCH CIRCUIT BREAKER FURNISHED WITH PANEL.
△ - CIRCUIT SHALL BE CONTROLLED VIA LIGHTING CONTROL RELAY PANEL.

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MOUNTING	LAMPS	VOLTAGE	INPUT WATTAGE	MANUFACTURER & CATALOG NUMBER	ALTERNATE BID MANUFACTURER	NOTES
"F1"	LED WALL PACK	WALL	LED	UNV.	30.1	LITHONIA LIGHTING #DSXW1-LED-P2-40K-80CRI	HLI BEACON LIGHTING, SIGNIFY GARDCO	2
"F2"	VAPOR-TIGHT LIGHT	CEILING	LED	UNV.	15	LITHONIA LIGHTING #OLVTCM	HLI COLUMBIA LIGHTING, SIGNIFY DAY-BRITE	1

NOTES:
1. CONTRACTOR TO PROVIDE ALL OPTIONS AND ACCESSORIES AS REQUIRED TO INSTALL LUMINAIRES IN VARYING CEILING TYPES AS SHOWN ON THE PLANS.
2. REFER TO ELEVATION PLANS FOR EXACT MOUNTING HEIGHTS.

GENERAL NOTES:
a. CONTRACTOR TO PROVIDE ALL NECESSARY MOUNTING HARDWARE AND LABOR FOR ALL LUMINAIRES.
b. ALL FINISH COLORS AND COLOR TEMPERATURES TO BE CONFIRMED BY THE ARCHITECT.

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DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

ELECTRICAL RISER DIAGRAM, SCHEDULES AND DETAILS

SHEET NUMBER:

E2.00

ELECTRICAL SPECIFICATIONS

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2017 NATIONAL ELECTRICAL CODE WITH CITY OF CRYSTAL LAKE AMENDMENTS AND SHALL CONFORM TO MCHENRY COUNTY COLLEGE STANDARDS.
2. PROVIDE ALL PERMITS AND INSPECTION FEES.
3. ALL MATERIAL AND LABOR SHALL BE GUARANTEED FOR ONE YEAR AFTER FINAL ACCEPTANCE BY THE OWNER.
4. CONTRACTOR SHALL PROVIDE THEIR OWN RIGGING, SCAFFOLDING, RUBBISH REMOVAL, AND LEAVE SPACE BROOM CLEAN.
5. MINIMUM SIZE CONDUIT SHALL BE 3/4" EMT. PROVIDE IMC/RMC WHERE EXPOSED TO WET OR DAMP LOCATIONS. IMC/RMC SHALL HAVE THREADED CONNECTIONS. TRANSITION TO LIQUID-TIGHT FLEXIBLE METAL CONDUIT FOR FINAL CONNECTION (MAXIMUM LAST 6 FEET) OF CONDUCTORS SERVING EQUIPMENT SUBJECT TO VIBRATION.
6. MINIMUM SIZE CONDUCTOR SHALL BE #12 THHN, OR THWN WHERE REQUIRED. CONDUCTOR MATERIAL SHALL BE COPPER ONLY.
7. PROVIDE SEPARATE, INSULATED EQUIPMENT GROUNDING CONDUCTOR WITHIN EACH FEEDER AND BRANCH CIRCUIT RACEWAY. TERMINATE EACH END ON SUITABLE LUG, BUS, OR BUSHING.
8. BRANCH CIRCUIT CONDUCTORS FOR 20 AMP RECEPTACLES AND LIGHTING CIRCUITS SHALL BE ADJUSTED FOR VOLTAGE DROP:

A. 120/208V:	0-75'	-	#12AWG MINIMUM
	75'-150'	-	#10AWG MINIMUM
	150'-225'	-	#8AWG MINIMUM
B. 277/480V:	0-100'	-	#12AWG MINIMUM
	100'-200'	-	#10AWG MINIMUM
	200'-300'	-	#8AWG MINIMUM

9. CONDUCTOR SIZES #14 AWG, #12 AWG, AND #10 AWG SHALL BE SOLID. CONDUCTOR SIZES #8 AWG AND LARGER SHALL BE STRANDED. ALL CONDUCTORS SHALL BE COLOR CODED.
10. CONTRACTOR SHALL PROVIDE ALL NECESSARY CUTTING AND PATCHING INCLUDING SLEEVES AND INSERTS.
11. COLOR AND FINISH OF ALL MATERIALS SHALL BE SUBJECT TO REVIEW AND APPROVAL BY OWNER. PROVIDE SHOP DRAWINGS REQUIRED FOR FINISH AND COLOR SELECTION.
12. ALL NEW CIRCUIT BREAKERS SHALL BE BOLT-ON BREAKERS (10,000 A.I.C. MINIMUM), COMPATIBLE WITH PANELBOARD. PROVIDE TYPEWRITTEN DIRECTORIES IN ALL PANELS.
13. CONTRACTOR SHALL VISIT THE SITE TO ASCERTAIN ALL WORK INVOLVED IN THE PROJECT.
14. CONTRACTOR SHALL COORDINATE THEIR WORK WITH OTHER CONTRACTORS ON THE PROJECT.
15. CONTRACTOR SHALL MAKE NECESSARY MODIFICATIONS AND ADJUSTMENTS TO ALL ELECTRICAL ITEMS AND EQUIPMENT AS MAY BE REQUIRED BY THIS WORK.
16. ALL ELECTRICAL EQUIPMENT MUST MAINTAIN WORKING CLEARANCES AS REQUIRED BY NEC.
17. FLEXIBLE RACEWAY SYSTEMS SHALL NOT BE USED TO PENETRATE ROOFS, FLOORS, OR AIR/MOISTURE BARRIERS.
18. RACEWAY SYSTEMS SHALL NOT BE ROUTED THROUGH OR IN HVAC DUCTS.
19. WIRING DEVICES:
    ACCEPTABLE MANUFACTURERS: HUBBELL, LEVITON, PASS & SEYMOUR OR COOPER.

    SWITCHES SHALL BE COMMERCIAL GRADE, 120/277 VOLT, BACK AND SIDE WIRED, TOGGLE TYPE RATED AT 20 AMPERES AND UL LISTED.

    RECEPTACLES SHALL BE SPECIFICATION GRADE, POLARIZED, GROUNDED, DUPLEX, BACK AND SIDE WIRED, RATED 20 AMPERES AND UL LISTED.
20. DEVICE PLATES:
    SMITH AND RECEPTACLE PLATES IN FINISHED AREAS SHALL BE 302/304 STAINLESS STEEL FROM SAME MANUFACTURER AS WIRING DEVICES.
21. LUMINAIRES:
    LUMINAIRES SHALL BE PROVIDED AS SPECIFIED ON DRAWINGS. LUMINAIRES SHALL BE HUNG AND MOUNTED IN PLACE, PROPERLY WIRED, TESTED, AND LEFT READY FOR OPERATION BY THE CONTRACTOR.

    WHERE LOCATED BENEATH DUCTWORK, THE CONTRACTOR IS PROHIBITED FROM PUNCTURING THE DUCTWORK OR MOUNTING LUMINAIRES DIRECTLY TO THE DUCTWORK. THE CONTRACTOR MAY MOUNT THE LUMINAIRES TO THE DUCTWORK SUPPORT MEMBERS.

    HANGING DEVICES, BRACKETS, ENCLOSURES, AND OTHER ACCESSORIES SHALL BE PROVIDED FOR A COMPLETE INSTALLATION AND SHALL BE INSTALLED BY THE CONTRACTOR.

    LUMINAIRES SHALL BE HUNG PLUMB AND SET SQUARE AGAINST THE WALL OR CEILING, OR SUSPENDED AS DESIGNATED.

    THE MOUNTING HEIGHT OF LUMINAIRES SHALL BE CONFIRMED BEFORE INSTALLATION.

GENERAL ELECTRICAL NOTES

1. THE MINIMUM WIRE SIZE SHALL BE 12 AWG. THE MINIMUM CONDUIT SIZE FOR HOMERUNS AND BRANCH FEEDS SHALL BE 3/4". ALL BRANCH CIRCUITS SHALL TERMINATE AT 20A. 1-POLE CIRCUIT BREAKERS IN PANELBOARD INDICATED UNLESS OTHERWISE NOTED.
2. PROVIDE ALL PENETRATIONS, SLEEVES, AND SEALANT AS REQUIRED THROUGH PARTITIONS TO ACCOMMODATE THE FIRE ALARM, VOICE, AND DATA CABLING. ANY PENETRATIONS THROUGH WALLS AND FLOORS SHALL BE PROPERLY SEALED AND TREATED TO MAINTAIN THE FIRE STOPPING RATING OF THE WALLS, FLOORS AND CEILINGS.
3. BACKBOXES ARE TO BE MOUNTED OFFSET, NOT BACK TO BACK.
4. CIRCUIT NUMBER(S), WHERE SHOWN, ARE TO INDICATE QUANTITY OF CIRCUITS REQUIRED. VERIFY EXACT CIRCUIT NUMBER TO BE UTILIZED IN FIELD. CONTRACTOR SHALL PROVIDE ACTUAL CIRCUITING AS PART OF "AS BUILT" DRAWINGS.
5. UNLESS INDICATED OTHERWISE, MATERIALS REQUIRED TO PROVIDE BRANCH CIRCUITS AND FEEDERS ARE TO BE NEW.
6. DURING THE COURSE OF INVESTIGATION AND DEMOLITION, IF IT IS DETERMINED THAT IT MAY BE FEASIBLE TO UTILIZE EXISTING MATERIALS FOR BRANCH CIRCUITS AND FEEDERS, CONTRACTOR SHALL NOTIFY ENGINEER FOR APPROVAL PRIOR TO PERFORMING ANY WORK.
7. PROVIDE PULL BOX(ES) BETWEEN PULL POINTS AS REQUIRED TO COMPLY WITH NEC 344.26 THAT THERE SHALL NOT BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BEND (360 DEGREE TOTAL) BETWEEN PULL POINTS.
8. SPECIAL ATTENTION SHALL BE PAID TO ALL CONDUIT ROUTING IN OPEN CEILING SPACE FOR AESTHETIC PURPOSES. ALL EXPOSED CONDUITS SHALL BE ROUTED PERPENDICULAR AND PARALLEL TO BUILDING LINES AND TIGHT TO CEILING/STRUCTURAL CORNERS. WHERE THIS IS NOT FEASIBLE, SUBMIT CONDUIT ROUTING PLAN TO ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
9. CONTRACTOR SHALL PROVIDE DEDICATED NEUTRAL FOR EACH BRANCH CIRCUIT TO MEET THE REQUIREMENTS OF NEC ARTICLE 210.4(B).
10. PROVIDE BOND TO JUNCTION BOX FROM EQUIPMENT GROUNDING CONDUCTOR IN JUNCTION BOXES WHERE CURRENT CARRYING CONDUCTORS ARE SPLICED OR TERMINATED.
11. CONDUITS AND RACEWAYS SHALL NOT BE ROUTED ACROSS FLOORS OR SLABS.
12. REFER TO ARCHITECTURAL FLOOR PLANS FOR ADDITIONAL INFORMATION REGARDING MOUNTING HEIGHTS AND LOCATIONS OF ELECTRICAL DEVICES BEFORE ROUGH-IN. WHERE CONFLICTS BETWEEN ELECTRICAL & ARCHITECTURAL ELEVATIONS ARISE, CONTRACTOR TO VERIFY WITH ARCHITECT/ENGINEER TEAM PRIOR TO ROUGH-IN.

GENERAL SITE ELECTRICAL NOTES

1. SCHEDULE 40 PVC CONDUIT IS ACCEPTABLE AT ALL UNDERGROUND LOCATIONS EXCEPT THOSE ROUTED UNDER DRIVEWAYS OR ROADWAYS. SCHEDULE 80 PVC CONDUIT SHALL BE PROVIDED AT ALL LOCATIONS WHERE IT WILL EXPERIENCE VEHICULAR LOADS.
2. ANY PENETRATIONS THROUGH BUILDING SHALL BE SEALED WATER TIGHT PER ARCHITECTS REQUIREMENTS. PROVIDE LINK-SEAL SLEEVE SYSTEM FOR ALL CONDUIT PENETRATIONS THROUGH THE EXTERIOR FOUNDATION WALL.
3. CONTRACTOR SHALL EXERCISE CARE IN EXCAVATION AND CONSTRUCTION SO AS NOT TO DISTURB EXISTING UNDERGROUND SITE UTILITIES (UNLESS SPECIFICALLY DOCUMENTED TO DO SO). CONTRACTOR SHALL EMPLOY A SERVICE TO LOCATE UTILITIES AND SHALL CONSULT WITH OWNER AS TO POSSIBLE LOCATIONS OF UNDERGROUND UTILITIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RESTORE SERVICE AND PAY FOR ANY UTILITY FEES IN CONNECTION WITH RESTORATION OF SERVICE IN THE EVENT OF DISRUPTION DUE TO EXCAVATION OR CONSTRUCTION.
4. LOCATIONS OF UTILITY LINES SHOWN FOR REFERENCE ONLY. EXACT ROUTING AND CONFIGURATION TO BE DETERMINED.
5. PROVIDE TRENCHING AND BACKFILL AS REQUIRED. BACKFILL PER ARCHITECTS REQUIREMENTS, SURFACE SUITABLE FOR FINAL PAVEMENT LAYER. CONTRACTOR TO COORDINATE WORK WITH ALL OTHER TRADES PRIOR TO ANY EXCAVATION.
6. ANY TRENCHING AND EXCAVATION WITHIN THE DRIPLINE OF TREES IS PROHIBITED UNLESS OTHERWISE APPROVED BY THE ARCHITECT. AT CONTRACTOR'S OPTION, DIRECTIONAL BORING MAY BE USED FOR SITE UTILITIES.
7. COORDINATE AND REVIEW WITH ARCHITECT FOR CONSTRUCTION PHASING, SCHEDULES AND FOR ADDITIONAL INFORMATION PRIOR TO SUBMITTING BID. INCLUDE ALL ASSOCIATED COSTS REQUIRED FOR A COMPLETE INSTALLATION AND OPERATIONAL SYSTEM.
8. CONTRACTOR SHALL PROVIDE FLUSH IN-GRADE PULL BOXES AS REQUIRED TO FACILITATE PULLING OF CONDUCTORS.
9. INSTALL TRACER WIRE LISTED FOR USE AND PURPOSE IN ANY UNDERGROUND CONDUITS DESIGNATED FOR TELECOMMUNICATIONS.
10. VOLTAGE DROP FROM END OF THE BRANCH CIRCUIT TO PANEL SHALL BE LIMITED TO 3%.

ELECTRICAL SYMBOL LIST (NOTE: NOT ALL SYMBOLS ARE USED IN THE PROJECT.)

- LUMINAIRE PER LUMINAIRE SCHEDULE.
- EMERGENCY EXIT FIXTURE, SURFACE CEILING MOUNTED, SINGLE OR DOUBLE FACE, WITH OR WITHOUT DIRECTIONAL ARROWS.
- EMERGENCY EXIT FIXTURE, SURFACE WALL MOUNTED, SINGLE OR DOUBLE FACE, WITH OR WITHOUT DIRECTIONAL ARROWS.
- EMERGENCY BATTERY LIGHT FIXTURE.
- SELF-CONTAINED EMERGENCY LUMINAIRE WITH DUAL WEATHERPROOF REMOTE HEADS, BATTERY BACK-UP AND SOLID STATE CHARGER PER SCHEDULE.
- (WP) SINGLE POLE 20 AMP 120-277V VOLT TOGGLE SWITCH INSTALLED 48" A.F.F.
  - "WP" DENOTES SWITCH WITH WEATHERPROOF COVER SIMILAR TO TAYMAC #TC100S SUITABLE FOR WET LOCATIONS.
- OS WALL SWITCH/OCCUPANCY SENSOR PER LIGHTING CONTROL SCHEDULE.
- OS CEILING OCCUPANCY SENSOR, LETTER INDICATES TYPE PER LIGHTING CONTROL SCHEDULE.
- DENOTES ELECTRICAL DEVICE MOUNTED ON SURFACE RACEWAY, WIREMOLD 700 SERIES OR EQUAL.
- SURFACE MOUNTED (EXPOSED) CONDUIT, BACKBOX FOR DEVICE AS SHOWN
- SURFACE MOUNTED (EXPOSED) RECEPTACLE OUTLET(S) AND CONDUIT, INSTALLATION IN NON-PUBLIC AREAS ONLY (JANITOR CLOSET, ELECTRIC, BOILER ROOMS)
- (GFI,WP) 20A. 2P, 3 WIRE, GROUNDING TYPE, 125V. SPECIFICATION-GRADE, TAMPER-RESISTANT TYPE DUPLEX RECEPTACLE NEMA 5-20R INSTALLED +16" A.F.F. UNLESS NOTED OTHERWISE.
  - "GFI" DENOTES RECEPTACLE EQUIPPED WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER.
  - "WP" DENOTES WEATHER-RESISTANT TYPE RECEPTACLE WITH WHILE-IN-USE, DIE-CAST METAL, WEATHERPROOF COVER SIMILAR TO TAYMAC #MX3300.
- (GFI,WP) 20A. 2P, 3 WIRE, GROUNDING TYPE, 125V. SPECIFICATION-GRADE, TAMPER-RESISTANT TYPE DUPLEX RECEPTACLE NEMA 5-20R INSTALLED 6" ABOVE COUNTER TOP OR +42" A.F.F. UNLESS NOTED OTHERWISE.
  - "GFI" DENOTES RECEPTACLE EQUIPPED WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER.
  - "WP" DENOTES WEATHER-RESISTANT TYPE RECEPTACLE WITH WHILE-IN-USE, DIE-CAST METAL, WEATHERPROOF COVER SIMILAR TO TAYMAC #MX3300.
- POWER OUTLET, CEILING MOUNTED
- CEILING JUNCTION BOX.
- WALL MOUNTED JUNCTION BOX.
- JUNCTION BOX WITH FLEXIBLE CONDUIT AND FINAL CONNECTION TO EQUIPMENT.
- CONDUIT ROUTED CONCEALED IN WALLS AND CEILING. HASH MARKS DENOTE QUANTITY OF #12 CONDUCTORS OR AS NOTED.
- CONDUIT ROUTED EXPOSED. INSTALL PARALLEL TO WALLS AND CEILINGS. HASH MARKS DENOTE QUANTITY OF #12 CONDUCTORS OR AS NOTED.
- CONDUIT ROUTED BELOW GRADE. HASH MARK DENOTES QUANTITY OF #12 CONDUCTORS OR AS NOTED.
- DENOTES CONDUIT, 3/4" MINIMUM
- DENOTES INSULATED GROUND WIRE, #12 AWG MINIMUM
- LONG TICK MARK DENOTES NEUTRAL CONDUCTOR, #10 AWG MINIMUM
- SHORT TICK MARK DENOTES LINE (HOT) OR SWITCH LEG CONDUCTOR, #12 AWG MINIMUM.
- CIRCUIT BREAKER PANELBOARD.

ELECTRICAL ABBREVIATIONS

A	AMPERES	MIN	MINIMUM
AFCI	ARC FAULT CIRCUIT INTERRUPTER	MLO	MAIN LUGS ONLY
A.F.F.	ABOVE FINISHED FLOOR	MOCP	MAXIMUM OVERCURRENT PROTECTION
C	CONDUIT	PT	POTENTIAL TRANSFORMER
C/B	CIRCUIT BREAKER	SPD	SURGE PROTECTIVE DEVICE
CT	CURRENT TRANSFORMER	TR	TAMPER-RESISTANT
CU	COPPER	TYP.	TYPICAL
EC	ELECTRICAL CONTRACTOR	U.N.O.	UNLESS NOTED OTHERWISE
EM	EMERGENCY	V	VOLTS
FLA	FULL LOAD AMPS	VA	VOLT - AMPERES
G, GRD.	GROUND	W	WATTS
GFI	GROUND FAULT CIRCUIT INTERRUPTER	WG	WIRE GUARD
GFPI	GROUND FAULT PROTECTIVE EQUIPMENT	WP	WEATHER PROOF
HP	HORSEPOWER	XFMR	TRANSFORMER
I.T.	INFORMATION TECHNOLOGY	1P	SINGLE POLE
KCM	THOUSAND CIRCULAR MILS	2P	TWO POLE
MAX	MAXIMUM	3P	THREE POLE
MCA	MINIMUM CIRCUIT AMPS	ϕ	PHASE
MCB	MAIN CIRCUIT BREAKER		

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Fire Tower Replacement

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DKA PROJECT NO: 25-028

KEY PLAN:

SHEET STATUS: 04/21/2026

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

ELECTRICAL SYMBOL LIST, NOTES, AND SPECIFICATIONS

SHEET NUMBER:

E3.00