OWENSBORO INDOOR SPORTS FACILITY

500 WEST THIRD STREET, OWENSBORO, KY 42301

SCB PROJECT NUMBER: 2259

OWENSBORO BID NUMBER: 4387

CONSTRUCTION DOCUMENTS

MAY 20, 2024

OWNER:

CITY OF OWENSBORO

TOM WATSON - MAYOR

MARK CASTLEN - MAYOR PRO TEM
SHARON NESMITH - COMMISSIONER
BOB GLENN - COMMISSIONER
PAMELA L. SMITH-WRIGHT - COMMISSIONER
NATE PAGAN - CITY MANAGER

INDEX TO DRAWINGS

C0.1 CODE INFORMATION

CIVIL

C-1.0 CIVIL INFORMATION & GENERAL NOTES
C-2.0 EXISTING TOPOGRAPHIC PLAN
C-2.1 DEMOLITION & EROSION PROTECTION SEDIMENT CONTROL PLAN PHASE I
C-2.2 EROSION PREVENTION EROSION CONTROL PLAN PHASE II
C-3.0 SITE LAYOUT PLAN
C-3.1 DIMENSIONED SITE LAYOUT PLAN
C-3.2 DIMENSIONED SITE LAYOUT PLAN
C-4.0 GRADING & DRAINAGE PLAN
C-4.1 ENLARGED GRADING PLAN
C-4.2 ENLARGED GRADING PLAN
C-5.0 SITE UTILITY PLAN
C-6.0 CONSTRUCTION DETAILS
C-6.1 CONSTRUCTION DETAILS
C-6.2 CONSTRUCTION DETAILS

STRUCTURAL

S0.0 GENERAL NOTES
S0.1 GENERAL NOTES
S0.2 SCHEDULES AND TYPICAL DETAILS
S1.0 A.C. PILE & CAP PLAN
S1.1 PILE CAP DETAILS
S2.0 GRADE BEAM PLAN
S2.1 SLAB-ON-GRADE PLAN
S2.2 FOUNDATION SECTIONS & DETAILS
S2.3 FOUNDATION SECTIONS & DETAILS
S2.4 FOUNDATION SECTIONS & DETAILS
S2.5 FOUNDATION SECTIONS & DETAILS
S3.0 MEZZANINE FRAMING PLAN - AREA A
S3.1 MEZZANINE FRAMING PLAN - AREA D
S4.0 PEMB ROOF FRAMING PLAN
S4.1 ROOF FRAMING PLAN - AREA D
S5.0 FRAMING SECTIONS & DETAILS
S5.1 FRAMING SECTIONS & DETAILS
S5.2 FRAMING SECTIONS & DETAILS
S5.3 FRAMING SECTIONS & DETAILS
S6.0 BRACE ELEVATIONS & DETAILS
S6.1 BRACE ELEVATIONS & DETAILS

ARCHITECTURAL

N0.1 ABBREVIATIONS, SYMBOL LEGEND,GENERAL NOTES, AND PARTITION TYPES
A1.1 FIRST FLOOR PLAN
A1.2 MEZZANINE FLOOR PLAN
A2.1 ENLARGED PLANS
A2.2 ENLARGED RESTROOM PLANS
A2.3 ENLARGED STAIRS & ELEVATOR PLANS & DETAILS
A2.4 STAIR AND ELEVATOR DETAILS
A2.5 ENLARGED PLANS, CASEWORK NOTES & DETAILS
A2.6 INTERIOR ELEVATIONS
A3.1 BUILDING ELEVATIONS
A3.2 BUILDING ELEVATIONS
A4.1 ROOF PLANS & DETAILS
A4.2 ROOF DETAILS
A5.1 BUILDING SECTIONS
A5.2 WALL SECTIONS
A6.1 DETAILS
A6.2 DETAILS
A7.1 FIRST FLOOR REFLECTED CEILING PLAN & DETAILS
A7.2 MEZZANINE CEILING PLAN & DETAILS
A8.1 DOOR SCHEDULE, DOOR, FRAME ELEVATIONS AND DETAILS
A8.2 FRAME DETAILS
A8.3 FRAME DETAILS
A9.1 STRIPING PLANS & DETAILS

MEP

U1.1 ELECTRICAL SITE UTILITIES PLAN

FP0.1 FIRE PROTECTION LEAD SHEET
FP1.1 FIRE PROTECTION FLOOR PLAN
FP1.2 FIRE PROTECTION MEZZANINE FLOOR PLAN

P0.1 PLUMBING LEAD SHEET
P0.2 PLUMBING SCHEDULES
P1.1 PLUMBING FLOOR PLAN - SANITARY
P1.2 PLUMBING MEZZANINE FLOOR PLAN - SANITARY
P1.3 PLUMBING FLOOR PLAN - SUPPLIES
P1.4 PLUMBING MEZZANINE PLAN - SUPPLIES
P2.1 PLUMBING ENLARGED PLANS - SANITARY
P2.2 PLUMBING ENLARGED PLANS - SUPPLIES
P3.1 PLUMBING DRAIN WASTE AND VENT DIAGRAM
P3.2 PLUMBING DRAIN WASTE AND VENT DIAGRAM
P3.3 PLUMBING DRAIN WASTE AND VENT DIAGRAM
P3.4 PLUMBING PARTIAL WATER PIPING DIAGRAM
P3.5 PLUMBING STORM WATER PIPING DIAGRAM
P3.6 PLUMBING GAS PIPING DIAGRAM
P4.1 PLUMBING DETAILS
P4.2 PLUMBING DETAILS

H0.1 HVAC LEAD SHEET
H1.1 HVAC FIRST FLOOR PLAN
H1.2 HVAC MEZZANINE PLAN
H5.1 HVAC SCHEDULES
H5.2 HVAC SCHEDULES

ME1.1 MECHANICAL-ELECTRICAL ROOF PLAN
ME2.1 MECHANICAL AND ELECTRICAL SECTIONS

E0.1 ELECTRICAL LEAD SHEET
E1.1 LIGHTING FLOOR PLAN
E1.2 LIGHTING MEZZANINE PLAN
E1.3 POWER FLOOR PLAN
E1.4 POWER MEZZANINE PLAN
E1.5 SPECIAL SYSTEMS FLOOR PLAN
E1.6 SPECIAL SYSTEMS MEZZANINE PLAN
E2.1 ELECTRICAL ENLARGED PLANS
E3.1 ELECTRICAL RISER DIAGRAM
E4.1 ELECTRICAL DETAILS
E4.2 ELECTRICAL DETAILS
E4.3 ELECTRICAL DETAILS
E4.4 ELECTRICAL DETAILS
E4.5 ELECTRICAL DETAILS
E5.1 ELECTRICAL SCHEDULES
E5.2 ELECTRICAL SCHEDULES
E5.3 ELECTRICAL SCHEDULES

SHERMAN CARTER BARNHART ARCHITECTS

SHERMAN CARTER BARNHART ARCHITECTS, PLLC

PROJECT MANAGER: ANDREW H. OWENS, AIA, CID

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LEXINGTON, KY 40508
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CIVIL ENGINEER

AMERICAN ENGINEERS, INC.
65 ABERDEEN DRIVE
GLASGOW, KENTUCKY 42141
P (270) 651-7220

STRUCTURAL ENGINEER

LOLLEY & ASSOCIATES
309 EAST FOURTH STREET
OWENSBORO KY 42303
P (270) 683-2770

MECHANICAL/ELECTRICAL ENGINEER

MARCUM ENGINEERING
500 S 17TH STREET
PADUCAH, KY. 42003
P (270) 444-9274

SMITH - K. STAPLETON REGISTERED NO 3293 COMMONWEALTH OF KENTUCKY ARCHITECTS

FINAL DOCUMENTS

SCB PROJECT NO. 2259

2259 OWENSBORO INDOOR SPORTS FACILITY
CIVIL COVER SHEET
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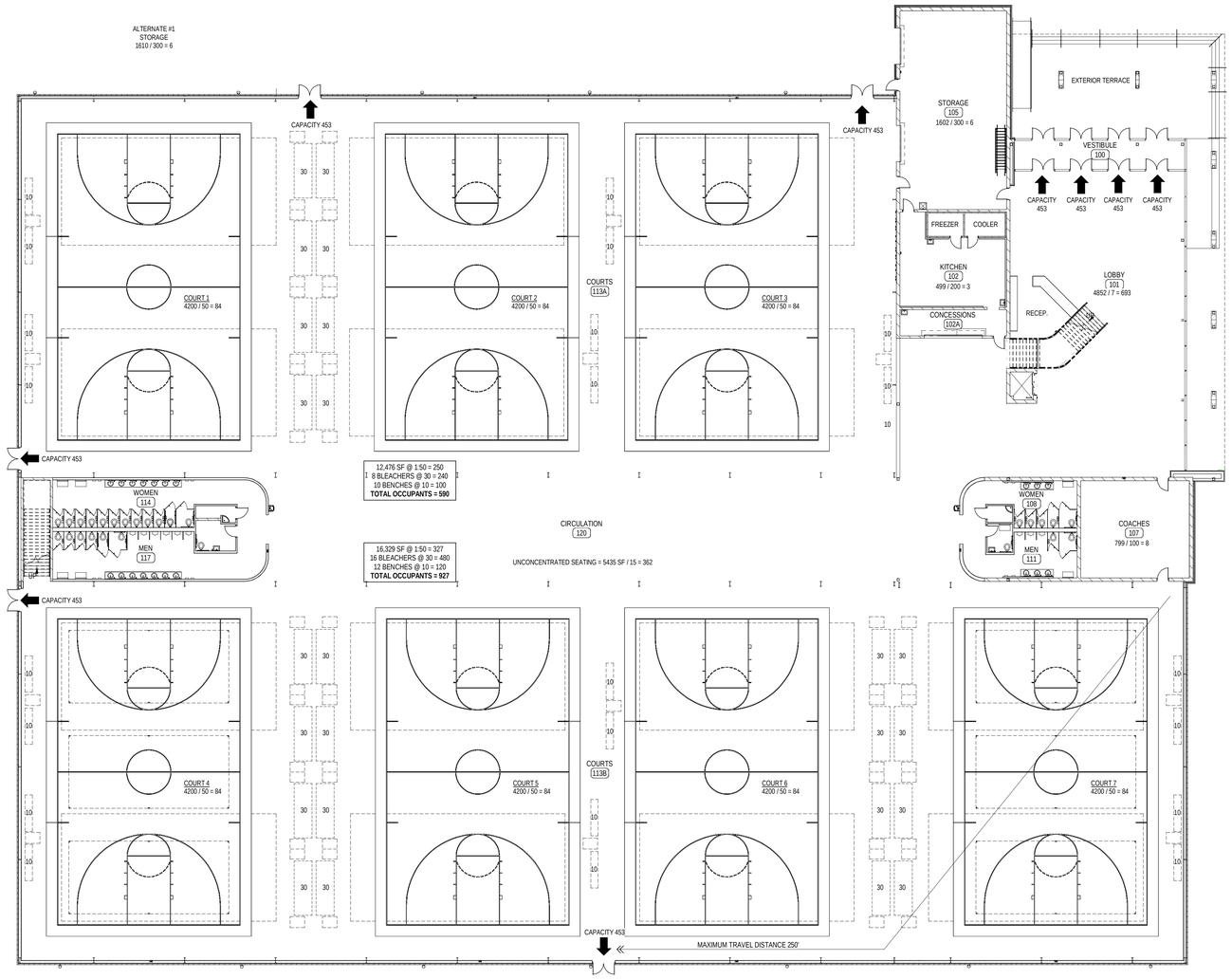
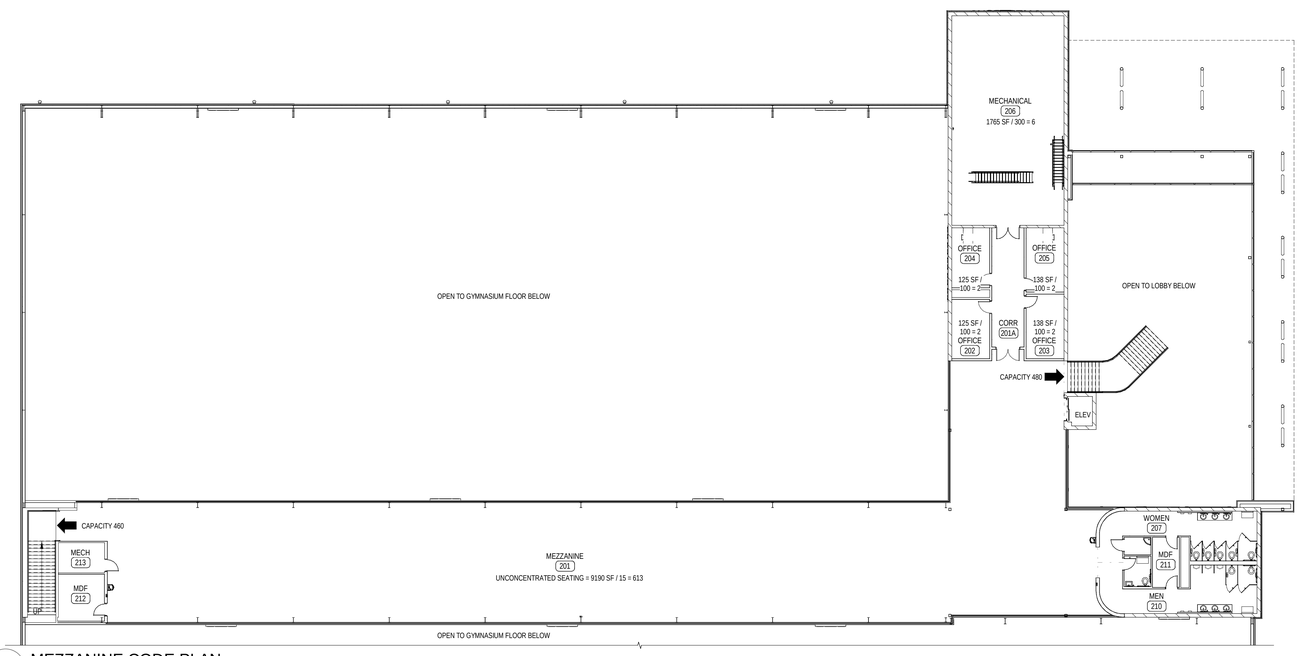


1 FIRST FLOOR CODE PLAN
1/16" = 1'-0"

NORTH



2 MEZZANINE CODE PLAN
1/16" = 1'-0"

SEISMIC DESIGN CRITERIA

(REFER TO SHEET SO.1 FOR ADDITIONAL INFORMATION)

RISK CATEGORY	III
SITE CLASS	D
SEISMIC DESIGN CATEGORY	C

OCCUPANT LOAD CALCULATION

OCCUPANT LOAD CALCULATION:

EXIT CAPACITY 4,077 OCCUPANTS

COURTS: 84 X 7 = 588
COURT AUXILIARY AREA 1 = 590
COURT AUXILIARY AREA 2 = 927
UNCONCENTRATED SEATING = 362
LOBBY = 693
COACHES = 8
KITCHEN = 3
STORAGE = 6
MEZZANINE UNCONCENTRATED SEATING = 613
OFFICE = 2
OFFICE = 2
OFFICE = 2
OFFICE = 2
MECHANICAL = 6

TOTAL OCCUPANTS = 3,804

MAX OCCUPANTS ARE CALCLUATED BASED ON VOLLEYBALL COURTS (WORST CASE)
4 TEAMS PER COURT X 11 PLAYERS PER TEAM - 44
14 COURTS X 44 = 616
1 SPECTATOR PER PLAYER = 616 X 2 = 1,232
ROUNDED TO 1,300 TO ACCOUNT FOR STAFF

ENERGY CODE COMPLIANCE

2012 IECC COMCHECK - PASS ASHRAE

SPECIAL INSPECTIONS PER CHAPTER 17 OF THE KENTUCKY BUILDING CODE

NOTE: IN ADDITION TO OTHER TESTS AND INSPECTIONS REQUIRED BY THE SPECIFICATIONS, THE OWNER SHALL PROVIDE THE SERVICES OF QUALIFIED THIRD-PARTY INSPECTORS TO PERFORM ALL REQUIRED SPECIAL INSPECTIONS AS FOLLOWS:

SECTION	ITEM	REQUIRED? _YES_	__NO_	REMARKS
1705.2	FABRICATORS	__X__	_____	STEEL FABRICATION SPECIAL INSPECTION IS REQUIRED IF THE FABRICATOR IS NOT A.I.S.C. OR AWS CERTIFIED.
1705.2.1	STEEL	__X__	_____	STRUCTURAL STEEL AND JOISTS, PER TABLE 1705.2.2
1705.3	CONCRETE	__X__	_____	PER TABLE 1705.3
1705.4	MASONRY	__X__	_____	PER TMS 402 / TMS 602
1705.5	WOOD	_____	__X__	NONE
1705.6	SOILS	__X__	_____	PER TABLE 1705.6
1705.7	DRIVEN DEEP FOUNDATION	_____	__X__	NONE
1705.8	CAST-IN-PLACE DEEP FOUNDATIONS	_____	__X__	NONE
1705.9	HELICAL PILE FOUNDATIONS	_____	__X__	NONE
1705.10	INSPECTIONS FOR WIND RESISTANCE	_____	__X__	Vasd 120 MPH, WIND EXPOSURE CAT. "C"
1705.11	INSPECTIONS FOR SEISMIC RESISTANCE	__X__	_____	SEISMIC DESIGN CATEGORY "D"
1705.12	TESTING & QUALIFICATION FOR SEISMIC RESISTANCE	__X__	_____	SEISMIC DESIGN CATEGORY "D"
1705.12.1	STRUCTURAL STEEL	__X__	_____	SEISMIC DESIGN CATEGORY "D"
1705.12.2	STRUCTURAL WOOD	_____	__X__	NONE
1705.12.3	COLD-FORMED STEEL LIGHT-FRAME CONST.	_____	__X__	NONE
1705.12.4	DESIGNATED SEISMIC SYSTEMS	__X__	_____	SEISMIC DESIGN CATEGORY "D"
1705.12.5	ARCHITECTURAL COMPONENTS	__X__	_____	SEISMIC DESIGN CATEGORY "D"
1705.12.6	PLUMBING, MECHANICAL AND ELECTRICAL COMPONENTS	__X__	_____	SEISMIC DESIGN CATEGORY "D"
1705.12.9	COLD-FORMED STEEL SPECIAL BOLTED MOMENT FRAMES	_____	__X__	NONE
1705.14	SPRAYED FIRE-RESISTANT MATERIALS	_____	__X__	NONE
1705.15	MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS	_____	__X__	NONE
1705.16	EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)	_____	__X__	NONE
1705.17	FIRE-RESISTANT PENETRATIONS AND JOINTS	__X__	_____	RISK CATEGORY III
1705.18	TESTING FOR SMOKE CONTROL	_____	__X__	NONE

NOTE: REFER TO STRUCTURAL SHEETS FOR STRUCTURAL QUALITY ASSURANCE

CODE COMPLIANCE INFORMATION

GENERAL INFORMATION :

CODE: KENTUCKY BUILDING CODE 2018, THIRD EDITION

USE GROUP: A-4 (ASSEMBLY)

CONSTRUCTION TYPE: TYPE II B

FIRE PROTECTION: FULLY SPRINKLERED PER NFPA 13, VOICE ALARM

BUILDING HEIGHT CALCULATIONS :

ALLOWABLE HEIGHT = 1 STORY / 65'-0" (TABLE 507.4)
ACTUAL BUILDING HEIGHT = 1 STORY + MEZZANINE / 42'-8"

TRAVEL DISTANCES :

TRAVEL DISTANCE TO EXIT:
ACTUAL MAXIMUM TRAVEL DISTANCE: 228'-0"
(MAXIMUM ALLOWABLE TRAVEL DISTANCE: 250'-0" (PER TABLE 1017.2)

BUILDING AREA:

ALLOWABLE AREA = UNLIMITED PER SECTION 507.4
(SECTION 507.4)
* BUILDING HAS 60' PUBLIC WAY
DISTANCE TO LOT LINE + PUBLIC RIGHT-OF-WAY = 60'+ ON ALL SIDES

BUILDING AREA:

FIRST FLOOR-	77,326 SQ. FT.
MEZZANINE -	13,021 SQ. FT.
EXTERIOR COVERED TERRACE	2,642 SQ. FT.
ALTERNATE STORAGE ROOM	1,610 SQ. FT.
TOTAL AREA:	94,599 SQ. FT.

MINIMUM FIRE RESISTANCE RATINGS (PER TABLES 601 AND 602)

STRUCTURAL FRAME :	0 HR
BEARING WALLS EXTERIOR :	0 HR
BEARING WALLS INTERIOR :	0 HR
NON-BEARING EXTERIOR WALLS :	0 HR > 30' DISTANCE
NON-BEARING INTERIOR WALLS :	0 HR
FLOOR CONSTRUCTION :	0 HR
ROOF CONSTRUCTION { < 20 FT. ABOVE FLOOR } :	0 HR
ROOF CONSTRUCTION { > 20 FT. ABOVE FLOOR } :	0 HR

SHERMAN CARTER BARNHART ARCHITECTS

FINAL DOCUMENTS

OWENSBORO INDOOR SPORTS FACILITY
500 WEST THIRD STREET
OWENSBORO, KY 42301

CODE INFORMATION

JOB NO.	2259
DATE	MAY 20, 2024
DRAWN	AN, CRG, DB
CHECKED	BKL, DB, AHO

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REVISIONS

No.	Description	Date

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OWENSBORO INDOOR SPORTS FACILITY
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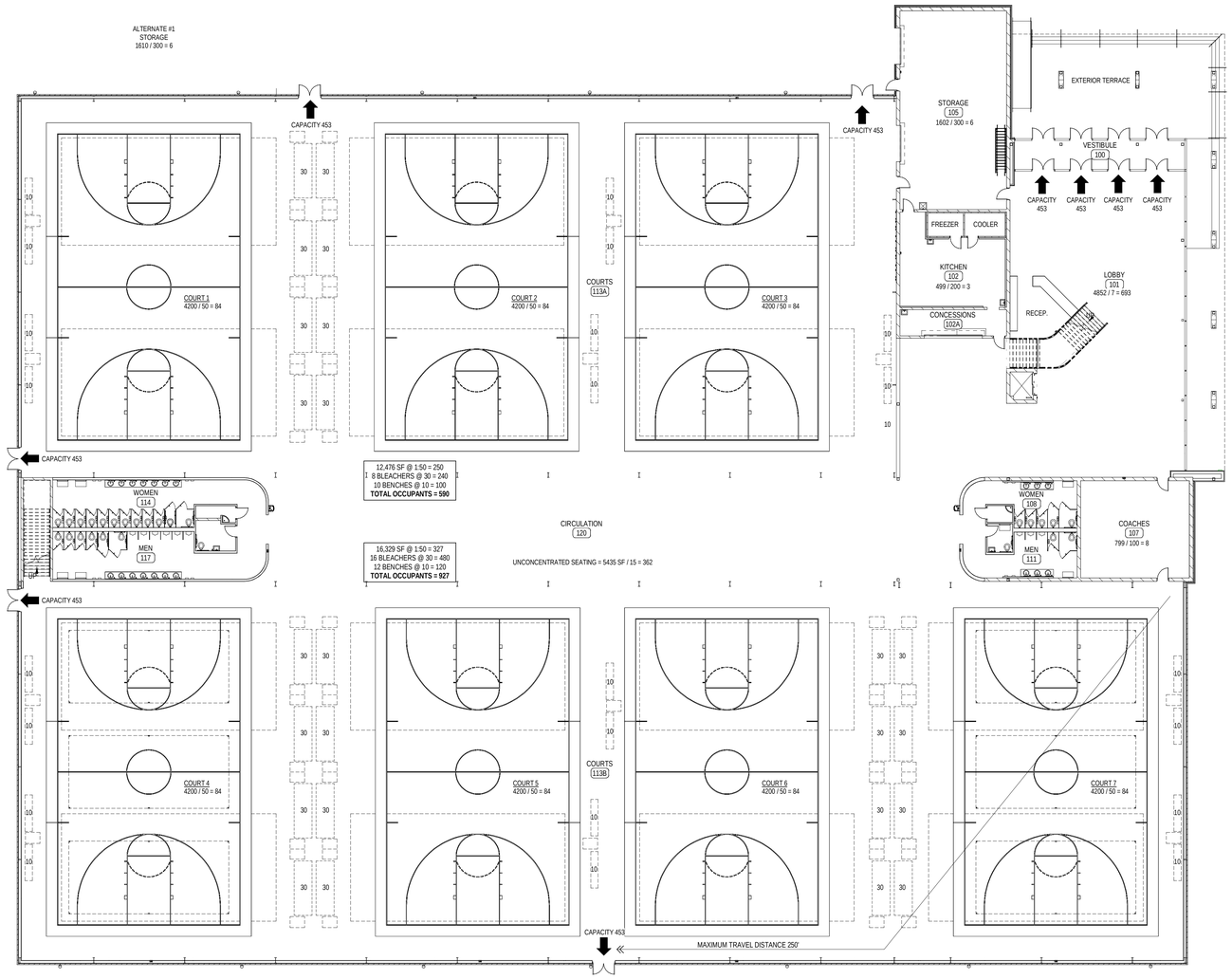

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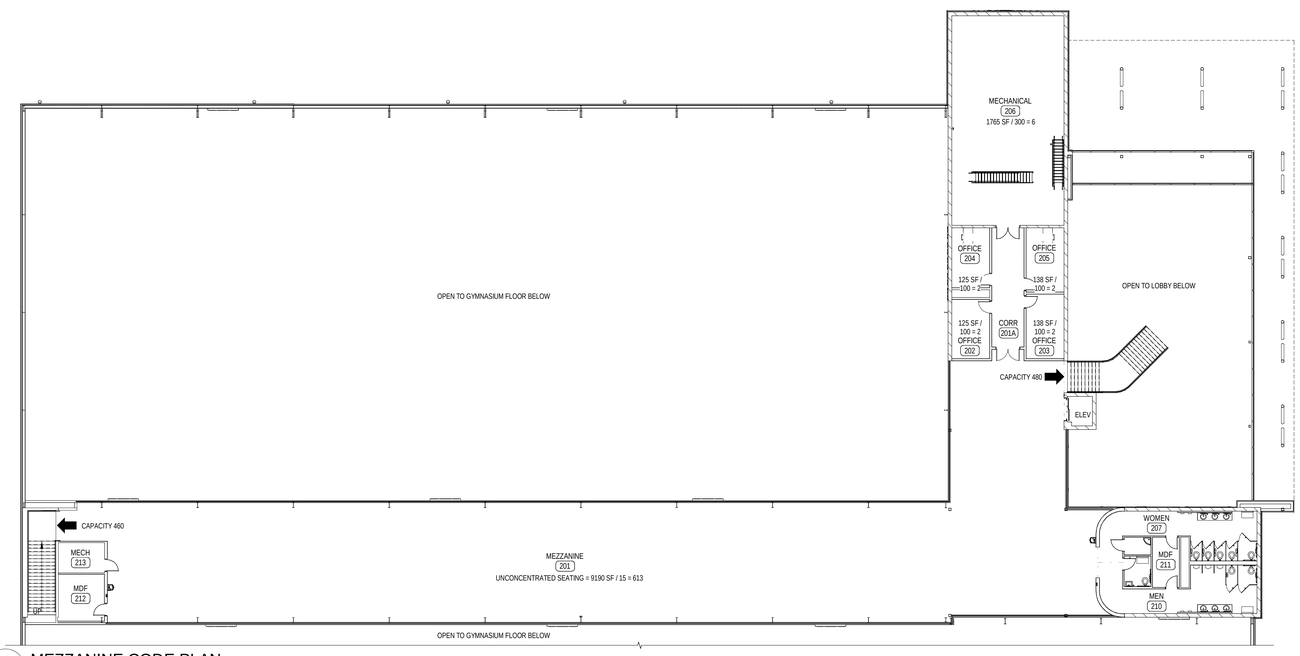

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1705.17	FIRE-RESISTANT PENETRATIONS AND JOINTS	__X__	_____	RISK CATEGORY III
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ROOF CONSTRUCTION (< 20 FT. ABOVE FLOOR) :	0 HR
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SHERMAN CARTER BARNHART ARCHITECTS

OWENSBORO INDOOR SPORTS FACILITY
500 WEST THIRD STREET
OWENSBORO, KY 42301

CODE INFORMATION

JOB NO.	2259
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DRAWN	AN, CRG, DB
CHECKED	BKL, DB, AHO

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REVISIONS

No.	Description	Date

SHEET
C0.1

2259
OWENSBORO INDOOR SPORTS FACILITY
5/17/2024 11:30:33 AM

CIVIL CONSTRUCTION PLANS
FOR
OWENSBORO INDOOR SPORTS FACILITY
OWENSBORO, KY
DAVIESS COUNTY

GENERAL NOTES

1. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL PERMITTING AUTHORITIES.
2. NO GRADING, STRIPPING, EXCAVATION, FILLING OR OTHER DISTURBANCE OF THE NATURAL GROUND COVER SHALL TAKE PLACE UNTIL PROPOSED SOIL EROSION CONTROL PLAN HAS BEEN APPROVED AND IN PLACE.
3. ALL DIMENSIONS INVOLVING CURB ARE SHOWN TO FACE OF CURB, UNLESS NOTED OTHERWISE.
4. IN THE CASE OF CONFLICT BETWEEN THIS DRAWING AND ANY OTHER DRAWING AND/ OR SPECIFICATIONS, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR CLARIFICATION.
5. THE CONTRACTOR SHALL BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND THE REQUIREMENTS OF LOCAL UTILITY COMPANIES.
6. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND WILL NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL BARRICADES, WARNING SIGNS, FLASHING LIGHTS AND THE TRAFFIC CONTROL DEVICES DURING CONSTRUCTION. CONTRACTOR SHALL COMPLY WITH OSHA REGULATIONS AND SAFETY REQUIREMENTS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF ALL VEHICLE TRAFFIC IN AND AROUND THE CONSTRUCTION AREA.
8. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 4" TOPSOIL, SEEDED, MULCHED AND WATERED AS NECESSARY TO PROVIDE SUBSTANTIAL GRASS COVER.
9. ALL PAVEMENT MARKINGS INCLUDING STRIPES, DIRECTIONAL ARROWS, ETC., SHALL BE WHITE PAINT (TWO COATS). HANDICAP SYMBOL COLORS SHALL BE PER LOCAL CODE. APPROVED EXTERIOR PAINTS ARE AS FOLLOWS:

   PRATT AND LAMBERT TRAFFIC PAINT
   SHERWIN-WILLIAMS PRO-MAR TRAFFIC MARKING
   -PAINT B29 SERIES
   GLIDDEN ROMARK TRAFFIC PAINT
   PPG ZONE AND TRAFFIC MARKING PAINT
   FOY-JOHNSTON TRAFFIC PAINT 9862
10. ANY DAMAGE TO JAMES T. ROGERS DRIVE OR 31-E DUE TO CONSTRUCTION ACTIVITIES SHALL BE REPAIRED TO NEW CONDITION AT NO **COST TO THE OWNER(S). EXTENTS OF DAMAGE AND REPAIR SHALL BE COORDINATED AND APPROVED BY THE OWNER(S) AND ENGINEER PRIOR TO CONSTRUCTION.**
11. **ROCK REMOVAL SHALL BE UNCLASSIFIED. ROCK REMOVAL REQUIREMENTS ARE OUTLINED IN SPECIFICATION SECTION 312200 EARTHWORK**
12. CLARIFICATION: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERMIT ANY WORK WITHIN THE TRIBUTARY TO SOUTH FORK BEAVER CREEK ALONG 31E. A BLUELINE STREAM ON USGS MAPPING. IF CONSTRUCTION ACTIVITIES EXCEED THE CURRENT PIPE EXTENSION SCOPE WHICH, AS DESIGNED, IS BELOW THE REGULATED TRIGGER FOR STREAM DISTURBANCE OF 0.03 ACRES OF IMPACT, ABOVE WHICH REQUIRING AN INDIVIDUAL PERMIT PER GUIDELINES OUTLINED BY US ARMY CORPS OF ENGINEERS.
13. CLARIFICATION: THE METHOD FOR TREE CLEARING, GRUBBING, BURNING AND/OR REMOVAL WILL BE AT THE DISCRETION OF THE CONTRACTOR AND HIS/HER SUBCONTRACTORS PER PERMITTING REQUIREMENTS FOR STATE, FEDERAL AND/OR LOCAL (CITY-COUNTY AND FIRE DEPT.) REVIEW PRIOR TO BEGINNING CONSTRUCTION. OPEN BURNING IS REGULATED BY 401 KAR 63:005.

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL NOTIFY KY-811 48 HOURS PRIOR TO EXCAVATION.
2. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
3. NO CUT OR FILL SLOPES SHALL BE CONSTRUCTED STEEPER THAN 3H:1V UNLESS SPECIFICALLY NOTED ON THE PLANS.
4. SITE GRADES AROUND PAVEMENT AND BUILDING AREAS SHALL BE GRADED DURING CONSTRUCTION TO PREVENT PONDING. ANY SURFACE WATER ACCUMULATION IN THE PAVEMENT AND BUILDING AREAS SHALL BE DRAINED IMMEDIATELY TO AVOID SATURATION OF THE SUBGRADE SOILS.
5. ALL EXCAVATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST OSHA GUIDELINES AS MANDATED IN CURRENT FEDERAL, STATE AND LOCAL REGULATIONS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE IN PROVIDING SAFE WORKING CONDITIONS IN CONNECTION WITH ANY EXCAVATION WORK.
6. SUITABLE FILL MATERIAL PLACED UNDER BUILDING AREAS SHALL BE PLACED IN MAXIMUM 8-INCH (LOOSE THICKNESS) VERTICAL LIFTS, WITH EACH LIFT BEING COMPACTED TO A MINIMUM OF 98 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY, AT A MOISTURE CONTENT WITHIN 2 PERCENT OF OPTIMUM. THE COMPACTION REQUIREMENT MAY BE REDUCED TO 95 PERCENT IN PROPOSED PAVED AREAS, AND TO 92 PERCENT IN PROPOSED LANDSCAPE AREAS. WETTING OR DRYING OF THE SOILS MAY BE NECESSARY TO ACHIEVE A MOISTURE CONTENT SUITABLE FOR COMPACTION. REPRESENTATIVE AND ADEQUATE FIELD DENSITY TESTING SHALL BE PERFORMED BY INDEPENDENT TESTING AGENCY PROVIDED BY OWNER TO VERIFY THAT COMPACTION REQUIREMENTS HAVE BEEN MET.
7. STONE BASES SHOULD BE COMPACTED TO A DENSITY SATISFACTORY TO ENGINEER, TYPICALLY 84% OF SOLID VOLUME OR BY TEST STRIP METHODS.
8. ALL EXISTING STRUCTURES, UNLESS OTHERWISE NOTED TO REMAIN, FENCING, TREES, ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF OFF SITE.
9. GRADE LINES SHOWN ARE FINISHED GRADE. CONTRACTOR SHOULD SEE DETAIL SHEET FOR APPROPRIATE PAVEMENT TYPE TO DETERMINE SUB-GRADE ELEVATIONS FOR PAVING AREAS.
10. CONTRACTOR IS ADVISED THAT FINAL GRADING AND CURB PLACEMENT SHALL BE COMPLETED TO ACCOMMODATE THE FOLLOWING:
    A. NO WATER WILL POND AT POINTS WHERE LANDSCAPE ISLANDS EXTEND INTO PARKING FIELDS.
    B. SPACES DESIGNATED FOR HANDICAP PARKING AND ACCESS AISLE SHALL HAVE A FINAL SLOPE AFTER PAVING IS COMPLETED OF NOT MORE THAN 2.0%. IF EITHER OF THESE ITEMS ARE NOT CONSTRUCTED AS OUTLINED ABOVE, REWORK WILL BE PROVIDED BY THE CONTRACTOR TO CORRECT DEFICIENCIES AT THE CONTRACTORS EXPENSE.
11. THE CONTRACTOR SHALL VERIFY POSITIVE FLOW FOR ALL STORM SEWER SYSTEMS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

UTILITY NOTES:

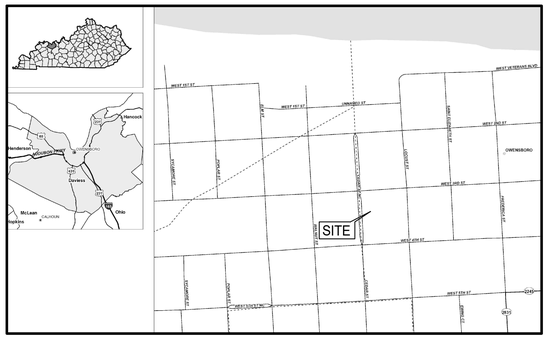
1. THE CONTRACTOR IS ADVISED THAT ALL EXISTING UTILITIES SHOWN WERE FIELD SURVEYED BASED ON LOCATIONS PROVIDED BY EACH UTILITY COMPANY. OTHER UTILITIES MAY EXIST THAT ARE UNMAPPED. THE CONTRACTOR IS ADVISED TO FIELD VERIFY ALL UNDERGROUND UTILITIES BY CONTACTING THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS TO EXCAVATION.
2. ALL UTILITIES TO BE CONSTRUCTED TO WITHIN 5' OF BUILDING.
3. BACK FILL OF ALL TRENCHES BENEATH STRUCTURES AND/OR PAVEMENT SHALL BE CRUSHED STONE OR SIMILAR MATERIAL AS APPROVED BY ENGINEER.
4. CONTRACTORS ARE ADVISED TO COORDINATE INSTALLATION OF ALL BURIED CONDUITS AND LINES SUCH THAT LINES WHICH CROSS ARE LAID BEGINNING WITH DEEPEST LINE FIRST.
5. DEPTH OF WATERLINE SHALL BE ADJUSTED AS REQUIRED TO ALLOW FOR SPECIFIED PLACEMENT OF SANITARY AND STORM SEWERS, BUT IN NO CASE LESS THAN 30".
6. TAPPING AND INSPECTION FEES TO BE PAID BY CONTRACTOR, METER FEES TO BE PAID BY OWNER.
7. CONTRACTOR SHALL COORDINATE WATER AND SEWER SERVICES CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL UTILITY CO.
8. ALL TRENCHING, PIPE LAYING AND BACK FILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
9. CONTRACTOR SHALL OBTAIN APPROVAL FROM ALL GOVERNING AGENCIES HAVING JURISDICTION OF UTILITY SYSTEMS PRIOR TO INSTALLATION.
10. ALL GATE VALVES SHALL BE PROVIDED WITH VALVE BOX IN ACCORDANCE WITH WATER UTILITY STANDARDS.
11. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS AND SHALL BE CONSTRUCTED ACCORDING TO WATER DEPARTMENT STANDARDS. 12. ALL WATER AND SANITARY SEWER SERVICE LINES TO THE BUILDING(S) SHALL BE PROVIDED WITH A TEMPORARY PLUG (FOR OTHERS TO REMOVE AND EXTEND AS NECESSARY).
12. THE CONTRACTOR SHALL FLUSH AND TEST ALL NEW UTILITY LINES ACCORDING TO THE STATE DIVISION OF WATER OR LOCAL WATER CO. STANDARDS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS AND ELEVATIONS OF EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION. ANY CONFLICTS DISCOVERED AFTER CONSTRUCTION HAS BEGUN, SHALL BE CORRECTED AT CONTRACTORS EXPENSE.
14. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SEWER LINES IS TEN FEET OUTSIDE DIAMETER TO OUTSIDE DIAMETER. THE MINIMUM VERTICAL SEPARATION IS EIGHTEEN INCHES.
15. BEFORE YOU DIG: CONTRACTOR SHALL NOTIFY BUD, 1-800-752-6077 48 HOURS PRIOR TO EXCAVATION, TO LOCATE AND FLAG ALL UNDERGROUND UTILITIES WITHIN THE PROPOSED RIGHT OF WAY.

JOB SITE SAFETY

1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY DURING CONSTRUCTION. JOB SITE SAFETY IS OUTSIDE THE SCOPE OF WORK OF AMERICAN ENGINEERS, INC. AND SHERMAN CARTER BARNHART AND NEITHER THE PROFESSIONAL ACTIVITIES OR THE PRESENCE OF AEI OR SUBCONSULTANTS AT THE CONSTRUCTION SITE SHALL RELIEVE THE CONTRACTOR OR ANY OTHER ENTITY OF THEIR OBLIGATION, DUTIES, AND RESPONSIBILITIES INCLUDED, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCES, TECHNIQUES, TO PROCEDURES NECESSARY FOR PERFORMING SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH AND SAFETY PRECAUTIONS REQUIRED BY GOOD CONSTRUCTION PRACTICES OR ANY REGULATORY AGENCIES. ANYONE USING INFORMATION FROM THESE PLANS ACKOWLEDGES AND WARRANTS THAT AEI IS NOT RESPONSIBLE FOR SITE SAFETY IN ANY WAY.

ACCESSIBILITY INFORMATION

1. ALL RAMPS SIDEWALKS AND APRONS SHALL BE COMPLIANT WITH THE MOST CURRENT DEPARTMENT OF JUSTICE ADA REQUIREMENTS (ADA STANDARDS FOR ACCESSIBLE DESIGN, CODE OF FEDERAL REGULATIONS, CURRENT EDITION).
2. THE ELEVATION OF ALL EXTERIOR WALKS AND SLABS SHALL BE ADA COMPLIANT AND AT 1/4" BELOW FINISH FLOOR AT ALL DOORS. AN ADA LANDING SHALL BE PROVIDED AT ALL DOORS.
3. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL BE ADA COMPLIANT, NOT TO EXCEED 2% IN ANY DIRECTION.



LOCATION MAPS
NOT TO SCALE

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65 ABERDEEN DRIVE
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(270) 651-7220

SURVEYOR
JEFFREY C. SMITH, P.L.S.
AMERICAN ENGINEERS, INC.
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LEGEND / ABBREVIATIONS

ABBREVIATIONS

A	AREA
ALT	ALTERNATE
AMP	AMPERE
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
B/C	BACK OF CURB
BIT	BITUMINOUS PAVEMENT
BM	BENCH MARK
C	CONDUIT
CAL	CALIPER
CB	CATCH BASIN
CFH	CUBIC FEET PER HOUR
C.I.	CURB ISLAND
CIR	CIRCUIT
CONC	CONCRETE
DBI	DITCH BOTTOM INLET
DIA	DIAMETER
(E)	EAST
E.I.F.S.	EXTERIOR INSULATION FINISHING SYSTEM
EL, ELEV	ELEVATION
EQ	EQUIVALENT
ES	END SECTION
ETC	ETCETRA
FH	FIRE HYDRANT
FF	FINISHED FLOOR
FT	FOOT SQUARE
GND, GRD	GROUND
GP	GUTTER PAN
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
GV&BOX	GATE VALVE AND BOX
HC	HIGH CAPACITY
HD	HEAVY DUTY
HEX	
HT	HEIGHT
IE	INVERT ELEVATION
KVA	KILAVOLT AMPERE
LBS	POUNDS
LD	LIGHT DUTY
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET
LG	LARGE
MANUF	MANUFACTURE
MAT'L	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MH	MANHOLE
(N)	NORTH
OC	ON CENTER
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATON
PC	POINT OF CURVATURE
PE	POLYETHYLENE
PH	PHASE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RE:	REFERENCE
REQ'D	REQUIRED
ROW	RIGHT-OF-WAY
RW	RETAINING WALL
(S)	SOUTH
SAN	SANITARY SEWER
SB	SOIL BORING
SF, SQFT	SQUARE FEET
SQ	SQUARE
STM	STORM SEWER
STRUC	STRUCTURE
TC	TOP OF CURB
TEL	TELEPHONE
TP	TOP OF PAVEMENT
TRNF	TRANSFORMER
TS	TOP OF SLAB
TW	TOP OF WALL
TYP	TYPICAL
UC	UTILITY CROSSING
UD	UNDER DRAIN
W	WIRE
(W)	WEST
W/	WITH
WC	WATER COLUMN
WTR	WATER
WWF	WELDED WIRE FABRIC

LEGEND

- RIGHT OF WAY
- PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- EXISTING CONCRETE CURB W/ DROP CURB
- EDGE OF PAVEMENT
- EXISTING OVERHEAD WIRES
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING SANITARY SEWER
- EXISTING STORM
- EXISTING GASLINE
- EXISTING FENCE
- EXISTING FIRE HYDRANT
- WATER VALVE
- WATER METER
- GAS METER
- EXISTING POWER POLE
- EXISTING LIGHT POLE (2 LIGHTS)
- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORM SEWER MANHOLE
- DROP BOX INLET (DBI)
- EXISTING TRANSFORMER PAD
- TELEPHONE PEDESTAL
- EXISTING TREE
- SPRINKLER HEAD
- EXISTING SIGN
- BENCH MARK
- DOWNSPOUT
- ELECTRIC JUNCTION BOX
- EXISTING GUIDE WIRE
- EXISTING CLEANOUT
- EXISTING BOLLARD
- EXISTING STRUCTURE (AS NOTED)
- EXISTING CONCRETE
- EXISTING GRAVEL
- EXISTING LANDSCAPED AREA

AGENCIES

ZONING
OMPC:
200 EAST 3RD STREET
OWENSBORO, KY 42302
TELEPHONE: 270-687-8650

BUILDING PERMITS
OMPC:
200 EAST 3RD STREET
OWENSBORO, KY 42302
TELEPHONE: 270-687-8650

GAS
ATMOS ENERGY
3275 HIGHLAND POINTE DR.
OWENSBORO, KY42303
270-685-8000

TELEPHONE
AT&T
5115 FREDERICA STREET
OWENSBORO, KY 42301
TELEPHONE: 270-685-8405

ELECTRIC
OMU
2070 TAMARACK RD.
OWENSBORO, KY 42301
270-926-3200

SEWER
RWRA
2101 GRIMES AVE.
OWENSBORO, KY 42303
270-687-8450

WATER
OMU
2070 TAMARACK RD.
OWENSBORO, KY 42301
270-926-3200

TRANSPORTATION
KYTC DISTRICT 2
1840 NORTH MAIN STREET
MADISONVILLE, KY 42431
TELEPHONE: 270-824-7080

CITY OF OWENSBORO
CITY ENGINEERING OFFICE
11410 W. 5TH STREET
OWENSBORO, KY 42301
270-687-8641

INDEX OF SHEETS

5/15/24	C-1.0	COVER SHEET & GENERAL NOTES
5/15/24	C-2.0	EXISTING TOPO
5/15/24	C-2.1	DEMOLITION PLAN & EPSC PLAN PHASE I
5/15/24	C-2.2	EPSC PLAN PHASE II
5/15/24	C-3.0	SITE LAYOUT PLAN
5/15/24	C-3.1	DIMENSIONED SITE LAYOUT PLAN
5/15/24	C-3.2	DIMENSIONED SITE LAYOUT PLAN
5/15/24	C-4.0	GRADING & DRAINAGE PLAN
5/15/24	C-4.1	ENLARGED GRADING PLAN
5/15/24	C-4.2	ENLARGED GRADING PLAN
5/15/24	C-5.0	UTILITY PLAN
5/15/24	C-6.0	CONSTRUCTION DETAILS
5/15/24	C-6.1	CONSTRUCTION DETAILS
5/15/24	C-6.2	CONSTRUCTION DETAILS

SHEET INDEX LEGEND

01/01/23
- MOST RECENT ISSUE DATE
- LATEST REVISION NUMBER
- FILLED IN CIRCLE INDICATES DRAWING INCLUDED IN THIS DRAWING SET.

Kentucky 811

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

SHERMAN CARTER BARNHART ARCHITECTS

STATE OF KENTUCKY RICHARD TUTT 22.0.0 LICENSED PROFESSIONAL ENGINEER

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AMERICAN ENGINEERS, INC.
DESIGNING YOUR FUTURE
65 Aberdeen Drive Glasgow KY
270.651.7220

OWENSBORO INDOOR SPORTS FACILITY
500 W 3RD ST, OWENSBORO, KY 42301

CIVIL INFORMATION & GENERAL NOTES

JOB NO.	223-061
DATE	05-20-24
DRAWN	M. ALLEN
CHECKED	R. TUTT

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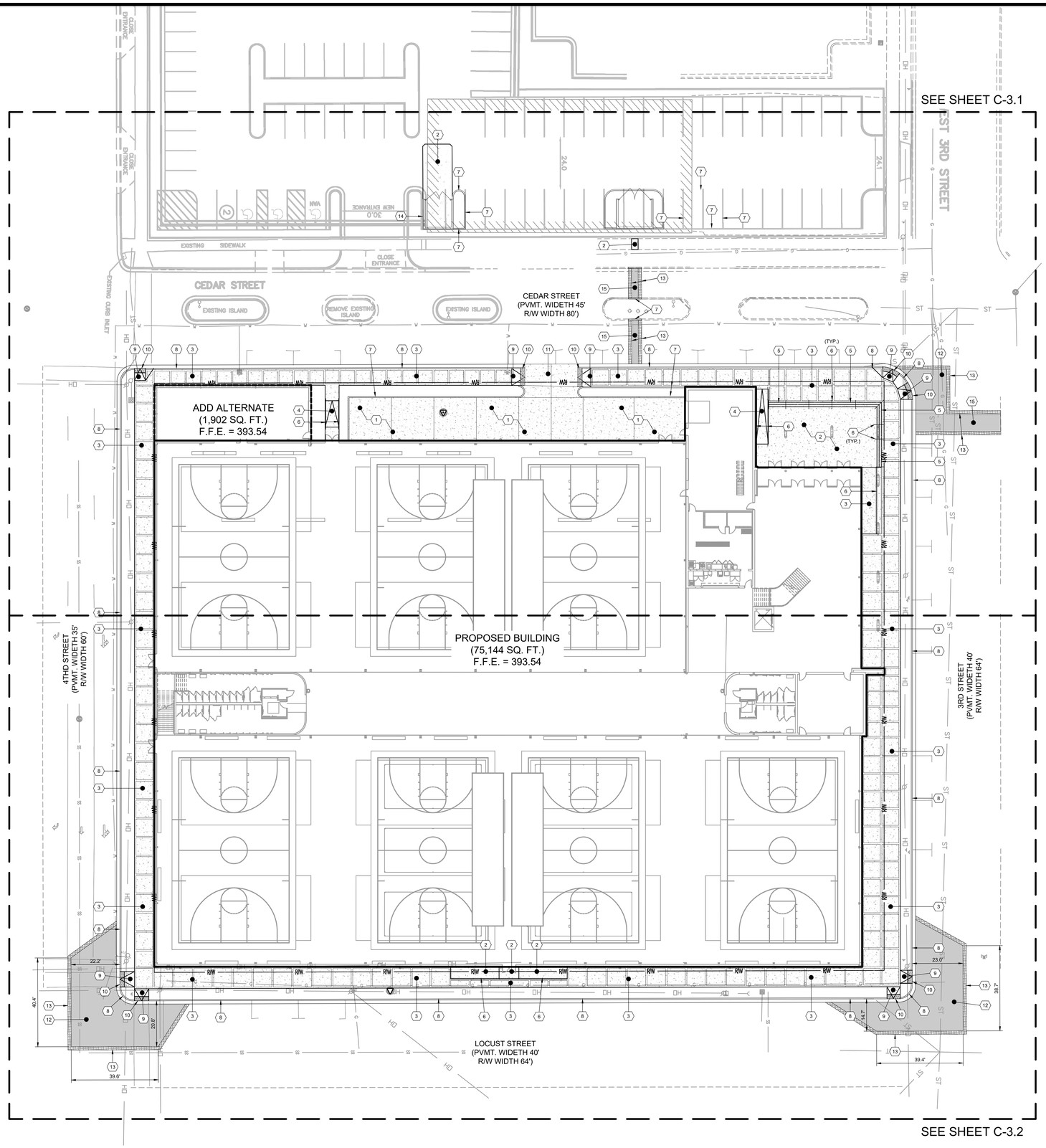
REVISIONS

No.	Description	Date

SHEET
C-1.0



CONSTRUCTION LEGEND

- CONCRETE PAVEMENT / SIDEWALK
- HEAVY DUTY ASPHALT PAVEMENT
- EDGE KEY
- TACTILE WARNING STRIP

GENERAL NOTES

1. LOT LIGHTING CONCRETE FOOTINGS TO CONFORM WITH THE SOILS REPORT RECOMMENDATIONS FOR THIS PARTICULAR SITE.
2. ANY WORK PERFORMED IN THE R.O.W. SHALL BE PER CITY GUIDELINES AND STANDARD SPECIFICATIONS.
3. ALL EXPOSED CONCRETE CORNERS TO BE CHAMFERED AND/OR TO HAVE RADII.
4. ALL EXPOSED CONCRETE CURBS, SIDEWALK, SLABS, PAVEMENT, AND FOUNDATIONS SHALL BE TREATED WITH AN AQURON CONCRETE TREATMENT AS MANUFACTURED BY AQURUN, OR APPROVED EQUAL.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF ANY REMAINING SITE IMPROVEMENTS PRIOR TO CONSTRUCTION.
6. ALL JOINTS WHERE NEW PAVEMENT ADJOINS EXISTING PAVEMENT SHALL BE SAW CUT, TO INSURE A STRAIGHT CLEAN LINE, OR WILL BE CARRIED TO THE NEXT EXPANSION JOINT ON DOT R.O.W. WHERE FEASIBLE.
7. ALL CURB RADII SHALL BE 5' (U.N.O.).
8. ALL CURB FACES AND PAVEMENT ELEVATION SHALL MATCH ADJOINING CURBING AND PAVEMENT EXACTLY.
9. STABILIZE AND GRASS ALL SLOPES TO PREVENT EROSION.
10. ALL DIMENSIONS ARE GIVEN TO THE FACE OF CURB.
11. CONTRACTOR TO USE EXISTING TOPOGRAPHIC PLAN IN CONJUNCTION WITH THIS SITE PLAN FOR LOCATION AND SIZES OF EXISTING FEATURES.
12. UNDERGROUND UTILITIES ARE BASED ON FIELD SURVEY. OTHER UTILITIES MAY EXIST AND ARE UNMAPPED. CONTRACTOR TO FIELD VERIFY UTILITIES IN PROJECT AREA. CONTRACTOR WILL REPLACE/MEND ALL UTILITIES DAMAGED DURING CONSTRUCTION.
13. PROVIDE 1/2" EXPANSION JOINT MATERIAL WITH SEALANT WHERE CONCRETE CURBS, SIDEWALK, OR PAVING ABUTS STORM STRUCTURES, BUILDINGS, ETC.
14. AT END OF PROJECT, CONTRACTOR SHALL REMOVE ALL CONSTRUCTION FENCING, EROSION CONTROL STRUCTURES, AND OTHER TEMPORARY SERVICES ON SITE.
15. ALL 90° CONCRETE PAVEMENT CORNERS SHALL RECEIVE 12" BY 12" CHAMFER.
16. ALL DISTURBED AREAS AND PARKING LOT ISLANDS SHALL RECEIVE A MINIMUM OF 6" TOPSOIL, SEEDED AND WATERED AS NECESSARY TO PROVIDE SUBSTANTIAL GRASS COVER.
17. ANY DAMAGE TO EXISTING STREETS/ROADS DUE TO CONSTRUCTION ACTIVITIES SHALL BE REPAIRED TO NEW CONDITION AT NO COST TO THE OWNER(S). EXTENTS OF DAMAGE AND REPAIR SHALL BE COORDINATED AND APPROVED BY THE OWNER(S) AND ENGINEER PRIOR TO CONSTRUCTION.
18. RE-STRIPE PAVEMENT MARKINGS TO MATCH EXISTING CONDITIONS.
19. REFER TO OWENSBORO METROPOLITAN PUBLIC IMPROVEMENT SPECIFICATIONS FOR ALL WORK IN THE RIGHT-OF-WAY

KEY NOTES

1. HEAVY DUTY CONCRETE PAVEMENT. RE: DETAIL 1 / C-6.0
2. ADA COMPLIANT SIDEWALK. RE: DETAIL 2 / C-6.0
3. ADA COMPLIANT SIDEWALK WITH PAVER FRAME. RE: DETAIL 3 / C-6.0
4. ADA COMPLIANT RAMP. RE: DETAIL 2 / C-6.0 AND SHEET C-4.0 GRADING PLAN
5. CONCRETE STEPS. RE: DETAIL 5 / C-6.0
6. HANDRAIL. RE: DETAIL 6 / C-6.0
7. HEADER CURB. RE: DETAIL 7 / C-6.0
8. R/W CURB AND GUTTER. RE: DETAIL 11 / C-6.0
9. R/W SIDEWALK RAMP. RE: DETAIL 12 / C-6.0 AND SHEET C-4.0 GRADING PLAN
10. R/W TACTILE WARNING STRIP. RE: DETAIL 1 / C-6.1
11. R/W CONCRETE ENTRANCE. RE: DETAIL 2 / C-6.1
12. HEAVY DUTY ASPHALT PAVEMENT. RE: DETAIL 8 / C-6.0
13. EDGE KEY. RE: DETAIL 4 / C-6.0
14. DUMPSTER ENCLOSURE. RE: DETAIL 3 / C-6.1
15. STREET CUT REPAIR. RE: DETAIL 4 / C-6.1

20 10 0 20 40

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SITE LAYOUT PLAN

JOB NO.	223-061
DATE	05-20-24
DRAWN	M. ALLEN
CHECKED	R. TUTT

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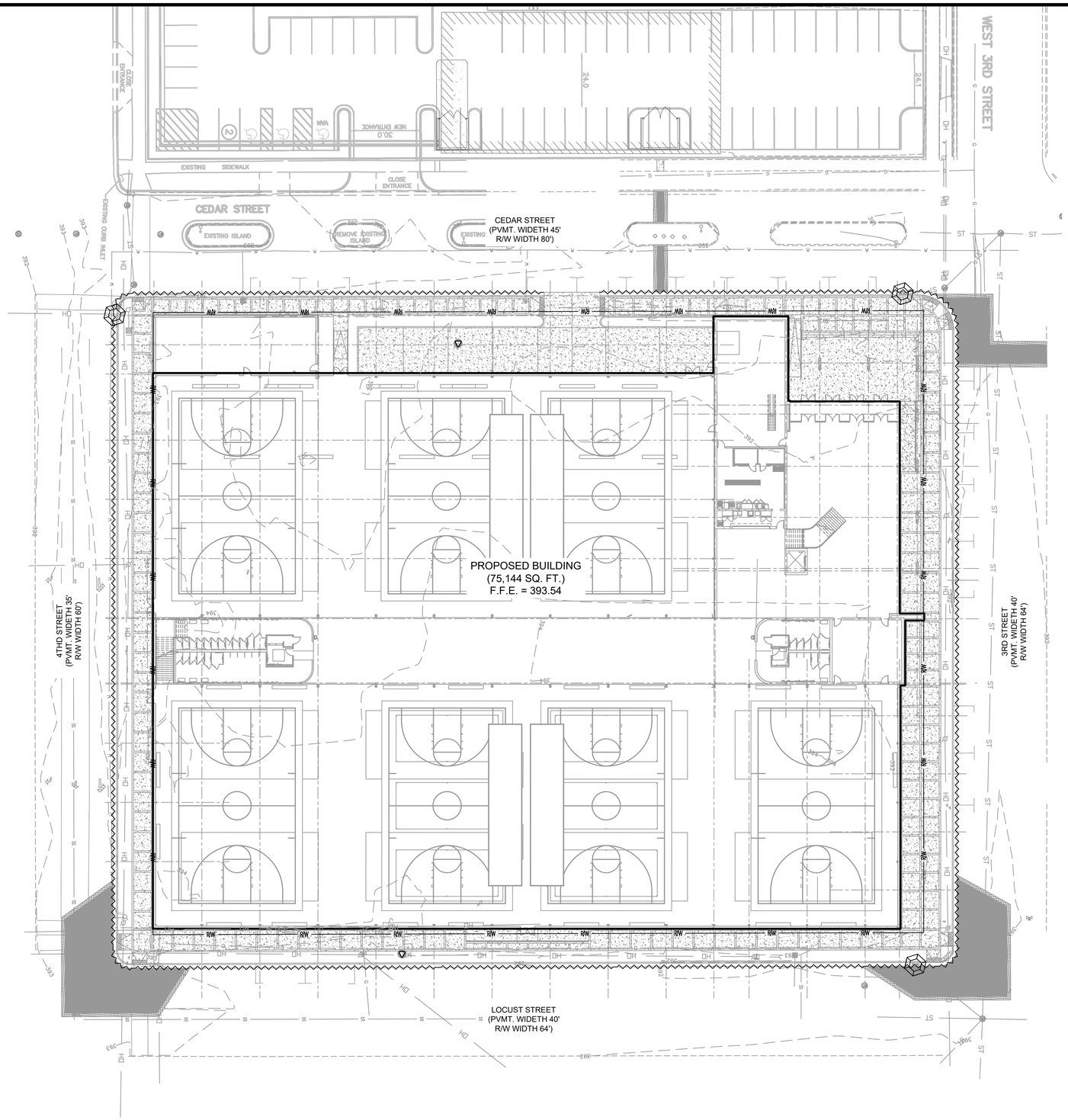
No.	Description	Date

SHEET

C-3.0



CONSTRUCTION LEGEND

INLET PROTECTION
RE: DETAIL 9 / C-6.0

FIBER ROLL
RE: DETAIL 10 / C-6.0

EPSC & CONSTRUCTION PHASE 2

1. THE FOLLOWING PHASING IS SUGGESTED BUT IS SUBJECT TO CHANGE UPON THE SELECTION OF A SITE CONTRACTOR THAT MAY PROPOSE A MORE FEASIBLE PLAN. ANY CHANGES TO THE APPROVED EROSION PREVENTION AND SEDIMENT CONTROL PLAN WILL RESULT IN REQUIRING REDLINE PLANS TO BE SUBMITTED FOR REVIEW AND APPROVAL BY BOWLING GREEN PUBLIC WORK.
2. MAINTAIN EXISTING INLET PROTECTION.
3. MAINTAIN EXISTING TEMPORARY SILT FENCE PROTECTION.
4. MAINTAIN EXISTING CONSTRUCTION ENTRANCE.
5. BEGIN EARTHWORK.
6. CONSTRUCT BUILDING.
7. INSTALL STORM DRAINAGE SYSTEM.
8. INSTALL NEW INLET PROTECTION.
9. INSTALL UTILITIES.
10. INSTALL CURBING, PAVEMENT AND SIDEWALKS.
11. REMOVE TEMPORARY EROSION CONTROL DEVICES AFTER SUBSTANTIAL COMPLETION.

40 20 0 40 80

SHERMAN CARTER BARNHART
ARCHITECTS

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EROSION PREVENTION EROSION CONTROL PLAN PHASE II

JOB NO.	223-061
DATE	05-20-24
DRAWN	M. ALLEN
CHECKED	R. TUTT

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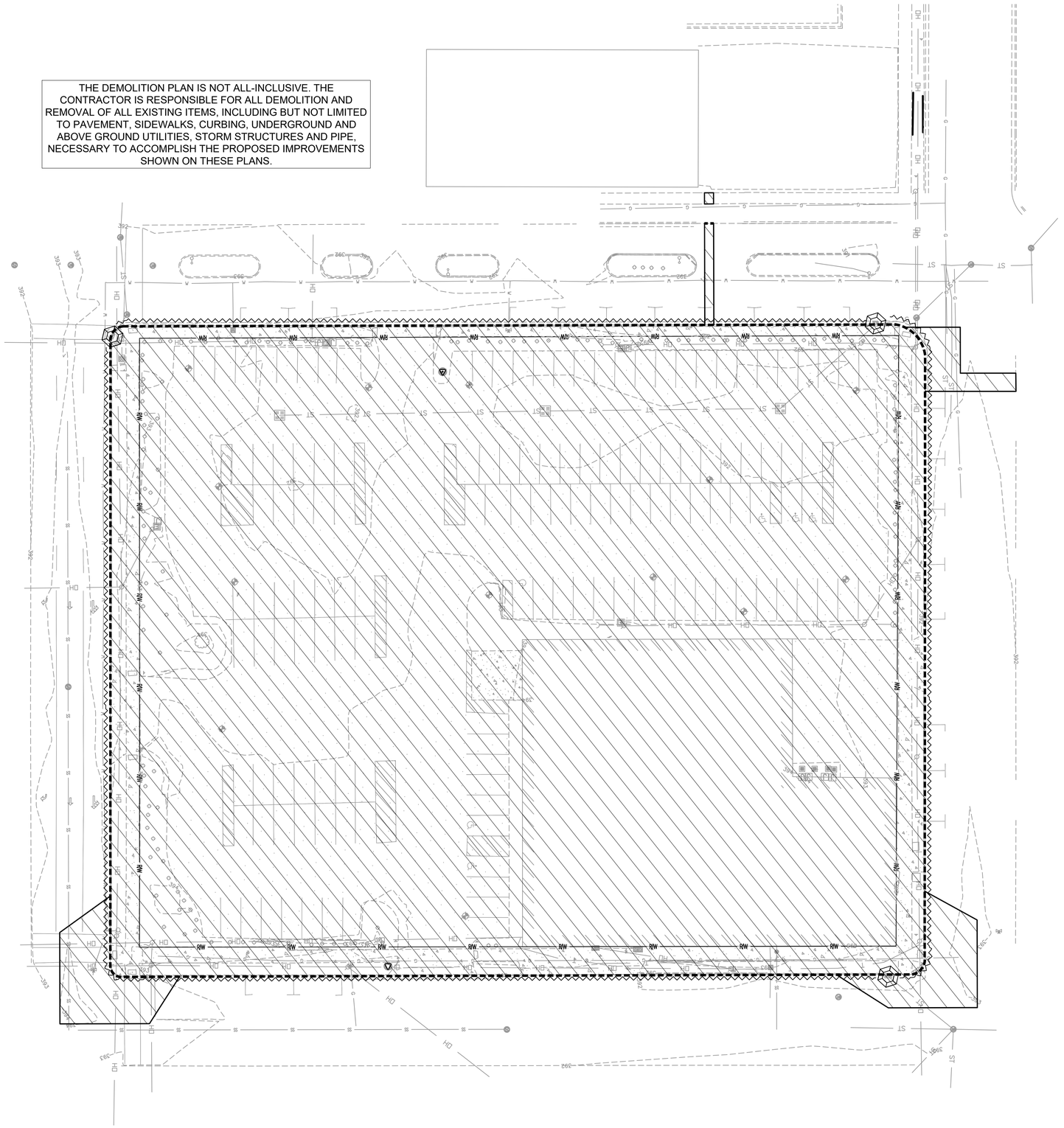
REVISIONS

No.	Description	Date

SHEET

C-2.2

THE DEMOLITION PLAN IS NOT ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND REMOVAL OF ALL EXISTING ITEMS, INCLUDING BUT NOT LIMITED TO PAVEMENT, SIDEWALKS, CURBING, UNDERGROUND AND ABOVE GROUND UTILITIES, STORM STRUCTURES AND PIPE, NECESSARY TO ACCOMPLISH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.



LEGEND
SYMBOLS THAT MAY APPEAR ON DRAWING

- SITE DEMOLITION - REMOVE ASPHALT, CONCRETE, SIDEWALK, UTILITIES, DROP BOX INLETS, BUILDING, ECT. NOT LIMITED TO ITEMS LISTED.
- CURB & GUTTER REMOVAL

CONSTRUCTION LEGEND

- INLET PROTECTION RE: DETAIL 9 / C-6.0
- FIBER ROLL RE: DETAIL 10 / C-6.0

EROSION PREVENTION MAINTENANCE SCHEDULE:

ALL BMP'S NEED TO BE MAINTAINED EVERY SEVEN (7) DAYS, AFTER EVERY STORM EVENT THAT EQUALS OR EXCEEDS 1/2 INCH PRECIPITATION, OR AFTER HEAVY USE.

SILT FENCE:
1. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO 1/3 THE HEIGHT OF THE FENCE.
2. IF FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF FENCE IMMEDIATELY.
3. TAKE CARE TO AVOID UNDERMINING OR DAMAGING THE FENCE WHEN CLEANING OUT SEDIMENT.
4. REMOVE THE FENCE AFTER ITS CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED. REMOVE THE FENCE AND SEDIMENT DEPOSITS, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE IT USING THE APPROPRIATE PERMANENT STABILIZATION METHOD.

TEMPORARY CONSTRUCTION ENTRANCE:
1. CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY.
2. MADE DAILY INSPECTIONS DURING WET WEATHER. MAINTENANCE IS REQUIRED MORE FREQUENTLY IN WET CONDITIONS.
3. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
4. WASH OR REPLACE STONE AS NEEDED AND AS DIRECTED BY THE INSPECTOR. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFFSITE BY VEHICLES. FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF THE STONE.
5. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.
6. REMOVE TEMPORARY CONSTRUCTION ENTRANCE AS SOON AS THEY ARE NO LONGER NEEDED TO PROVIDE ACCESS TO THE SITE.

STONE BAG INLET PROTECTION:
1. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE STONE BAGS SILT CHECK BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO 1/3 THE GEIGHT OF THE FENCE.
2. IF STONE BAGS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE OR DAMAGES OCCUR, REPLACE THE AFFECTED STONE BAGS IMMEDIATELY.
3. TAKE CARE TO AVOID UNDERMINING OR DAMAGING THE STONE BAGS WHEN CLEANING OUT SEDIMENT..
4. REMOVE THE STONE BAGS AFTER ITS CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED. REMOVE THE STONE BAGS AND SEDIMENT DEPOSITS, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE IT USING THE APPROPRIATE PERMANENT STABILIZATION METHOD.

EROSION PREVENTION & SEDIMENT CONTROL NOTES:

1. THE APPROVED EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) PLAN SHALL BE IMPLEMENTED PRIOR TO ANY LAND DISTURBING ACTIVITIES ON THE CONSTRUCTION SITE. ANY MODIFICATIONS TO THE APPROVED EPSC PLAN MUST BE REVIEWED AND APPROVED BY BOWLING GREEN PUBLIC WORKS OFFICE. EPSC BMP'S SHALL BE INSTALL PER THE PLAN AND BOWLING GREEN PUBLIC WORK STANDARDS.
2. ACTIONS MUST BE TAKEN TO MINIMIZE THE TRACKING OF MUD AND SOIL FROM CONSTRUCTION AREAS ONTO PUBLIC ROADWAYS. SOIL TRACKED ONTO THE ROADWAY SHALL BE REMOVED DAILY.
3. SOIL STOCKPILES SHALL BE LOCATED AWAY FROM STREAMS, PONDS,SWALED AND CATCH BASINS. STOCKPILES SHALL BE SEEDED, MULCHED, AND ADEQUATELY CONTAINED THROUGH THE USE OF SILT FENCE.
4. WHERE CONSTRUCTION OR LAND DISTURBANCE ACTIVITY WILL OR HAS TEMPORARILY CEASED ON ANY PORTION OF A SITE, TEMPORARY SITE STABILIZATION MEASURES SHALL BE REQUIRED AS SOON AS PRACTICABLE, BUT NO LATER THAN 14 CALENDAR DAYS AFTER ACTIVITY HAS CEASED.
5. SEDIMENT-LADEN GROUNDWATER ENCOUNTERED DURING TRENCHING, BORING OR OTHER EXCAVATION ACTIVITIES SHALL BE PUMPED TO A SEDIMENT TRAPPED DEVICE PRIOR TO BEING DISCHARGED INTO A STREAM, POND, SWALE OR CATCH BASIN.

EPSC & CONSTRUCTION PHASE 1

1. THE FOLLOWING PHASING IS SUGGESTED BUT IS SUBJECT TO CHANGE UPON THE SELECTION OF A SITE CONTRACTOR THAT MAY PROPOSE A MORE FEASIBLE PLAN. ANY CHANGES TO THE APPROVED EROSION PREVENTION AND SEDIMENT CONTROL PLAN WILL RESULT IN REQUIRING REDLINE PLANS TO BE SUBMITTED FOR REVIEW AND APPROVAL BY BOWLING GREEN PUBLIC WORK.
2. INSTALL INLET PROTECTION.
3. INSTALL TEMPORARY SILT FENCE PROTECTION.
4. INSTALL CONSTRUCTION ENTRANCE.
5. BEGIN EARTHWORK.

SITE DEMOLITION GENERAL NOTES:

1. THE CONTRACTOR SHALL CONFORM TO LOCAL CODES, OBTAIN ALL PERMITS AND GIVE ALL NOTICES REQUIRED FOR EXECUTION OF THE WORK.
2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL CHARTED AND UNCHARTED UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN, REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
3. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VERIFY THE LIMITS OF DEMOLITION WITH THE OWNER'S REPRESENTATIVE.
4. SAW CUT TO PROVIDE A CLEAN EDGE IN AREAS WHERE EXISTING PAVEMENT, WALKS, OR CURBS ARE TO BE REMOVED. THE EXTENT OF PAVEMENT DEMOLITION SHALL BE COORDINATED WITH THE LIMIT OF NEW IMPROVEMENTS ON THE PROPOSED SITE IMPROVEMENT PLANS.
5. THE CONTRACTOR SHALL COORDINATE PHASING OF THE DEMOLITION WITH THE OWNER'S REPRESENTATIVE AND LOCAL GOVERNING AGENCY PRIOR TO BEGINNING WORK. DISRUPTION OF EXISTING UTILITY SERVICES AND TRAFFIC PATTERNS SHALL BE MINIMIZED TO THE EXTENT POSSIBLE AND INITIATED ONLY AFTER APPROVAL BY THE LOCAL GOVERNING AGENCY AND THE UTILITY COMPANIES.
6. CAVITIES CREATED DURING DEMOLITION SHALL BE SUITABLY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS AND SPECIFICATIONS.
7. THE CONTRACTOR SHALL USE WATER SPRINKLING AND/OR OTHER SUITABLE METHODS AS NEEDED TO CONTROL DUST CAUSED BY THE DEMOLITION WORK.
8. THE CONTRACTOR IS RESPONSIBLE FOR ALL ABOVE GROUND AND BELOW GROUND DEMOLITION AND REMOVAL NECESSARY TO ACCOMPLISH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
9. THE CONTRACTOR SHALL PRESERVE AND PROTECT SURVEY CONTROL POINTS AND SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY DISTURBED CONTROL POINTS AT NO COST TO THE OWNER.
10. SITE LIGHTING DEMOLITION AND LAYOUT SHALL BE COORDINATED WITH THE ELECTRICAL DRAWINGS.
11. RELOCATION OF EXISTING PLANT MATERIALS SHALL BE COORDINATED WITH THE OWNER AND RELOCATED TO A DESIGNATED AREA ON SITE.
12. EXISTING SHRUBS TO BE PRESERVED ARE TO BE BARRICADED BEFORE BEGINNING CONSTRUCTION.
13. THE CONTRACTOR SHALL INCORPORATE INTO HIS WORK ANY ISOLATION VALVES OR TEMPORARY PLUGS REQUIRED TO CONSTRUCT NEW UTILITY LINES WHILE DEMOLISHING EXISTING UTILITY LINES.
14. REFER TO CONSTRUCTION MANAGER SITE PHASING REQUIREMENTS FOR ADDITIONAL INFORMATION.
15. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 4" TOPSOIL, SEEDED, MULCHED AND WATERED AS NECESSARY TO PROVIDE SUBSTANTIAL GRASS COVER.
16. ANY DAMAGE FROM CONSTRUCTION ACTIVITIES WITHIN PROPERTY LINES SHALL BE REPAIRED TO NEW CONDITION AT NO COST TO THE OWNER(S). EXTENTS OF DAMAGE AND REPAIR SHALL BE COORDINATED AND APPROVED BY THE OWNER(S) AND ENGINEER PRIOR TO CONSTRUCTION.

Kentucky 811

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500 W 3RD ST, OWENSBORO, KY 42301

DEMOLITION & EROSION PROTECTION SEDIMENT CONTROL PLAN PHASE I

JOB NO.	223-061
DATE	05-20-24
DRAWN	M. ALLEN
CHECKED	R. TUTT

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OWENSBORO, DAVIESS CO., KY.
VICINITY MAP (NOT TO SCALE)

GENERAL NOTES

1. THIS SURVEY IS SUBJECT TO ANY AND ALL LEGAL EASEMENTS AND RIGHT OF WAYS RECORDED OR UNRECORDED, INCLUDING BUT NOT LIMITED TO THOSE SHOWN HEREON.

2. THIS SURVEY IS SUBJECT TO ANY AND ALL FACTS THAT MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH.

3. THE LOCATION OF THE UNDERGROUND AND ABOVE GROUND UTILITIES SHOWN HEREON ARE BASED ON THE FIELD LOCATION OF FOUND VISIBLE STRUCTURES OR AS FLAGGED AND/OR PAINTED BY THEIR RESPECTIVE UTILITY COMPANIES. OTHER UTILITIES MAY EXIST, NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION AND/OR EXISTENCE OF SAID UNDERGROUND UTILITIES ON THIS SITE.

4. THE PROPERTY SHOWN HEREON IS SUBJECT TO THE RULES, REGULATIONS, SETBACKS AND ORDINANCES SET FORTH BY THE LOCAL PLANNING COMMISSION.

5. GPS NOTE:
95 % OF SURVEY WAS PERFORMED USING TRIMBLE - R12i - DUAL FREQUENCY GPS UNITS UTILIZING REAL TIME KINEMATIC SURVEYING TECHNIQUES. WITH AN UNADJUSTED PRECISION TO CONTROL POINTS BEING LESS THAN 0.04' OR BEING GREATER THAN 1 : 10,000.

6.FLOOD ZONE NOTE:
THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD ZONE AS INDICATED BY FLOOD INSURANCE RATE MAPS COMMUNITY PANEL NO. 21059C0138D, EFFECTIVE DATE OF APRIL 16, 2009

7. THIS IS NOT A BOUNDARY SURVEY. NOT TO BE RECORDED OR USED FOR THE TRANSFER OF REAL PROPERTY. LOT LINES ARE SHOWN FOR INDEXING PURPOSES ONLY AND SHOULD NOT BE CONSTRUED TO BE TRUE AND ACCURATE.

PARCEL OWNER AND SOURCE OF TITLE FOR SURVEY

CITY OF OWENSBORO
101 FOURTH STREET, PO BOX 10003
OWENSBORO, KY 42302

PVAs
006-02-02-001.00, 006-02-02-003.00, 006-02-02-004.00
006-02-02-005.00, 006-02-02-006.00, 006-02-02-007.00
006-02-02-008.00, 006-02-02-009.00, 006-02-02-010.00
006-02-02-011.00, 006-02-02-012.00

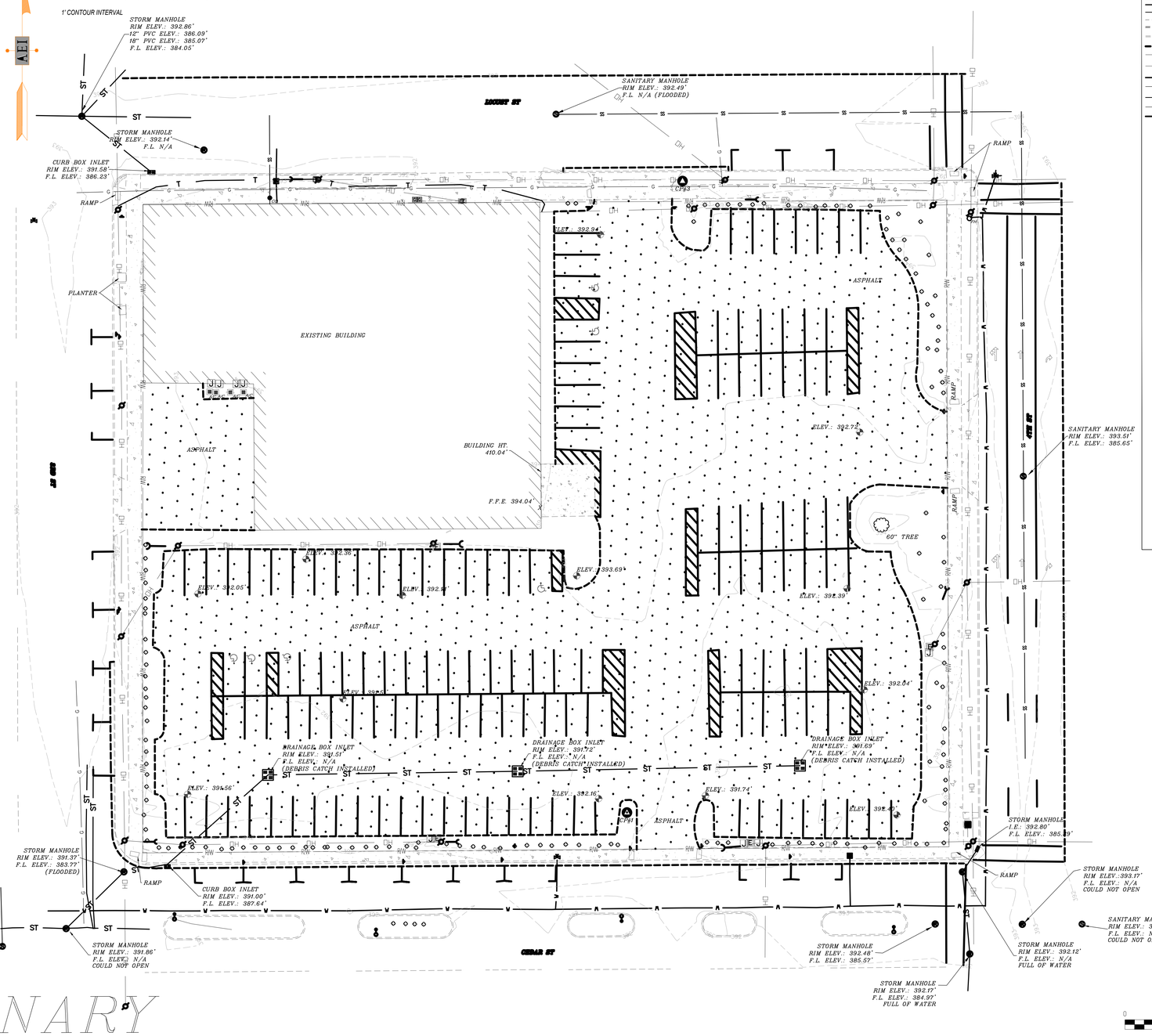
DEED BOOK 1077 PAGE 350

BASIS OF BEARINGS AND ELEVATIONS
THE BASIS OF THE BEARINGS SHOWN HEREON WERE BASED ON GRID NORTH AS IT RELATES TO THE KENTUCKY STATE PLANE COORDINATE SYSTEM (SINGLE ZONE) NAD83. ALL ELEVATIONS SHOWN HEREON WERE BASED ON NAVD88 (GEOID 18). AS OBSERVED VIA RTK BASED OFF OF NGS CORS NETWORK. FEBRUARY, 2023.

1' CONTOUR INTERVAL

CONTROL POINT TABLE

Point	Northing	Easting	Elevation	Description
1	3877457.5[illegible]	4[illegible]	397.97	CP/1PCS
3	3877[illegible]741	4[illegible]	392.51	NAIL



PRELIMINARY

LEGEND
SYMBOLS THAT MAY APPEAR ON DRAWING

- RIGHT OF WAY
- PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- EXISTING CONCRETE CURB W/ DROP CURB
- EDGE OF PAVEMENT
- EXISTING OVERHEAD WIRES
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING SANITARY SEWER
- EXISTING GASLINE
- EXISTING FENCE
- F.H. EXISTING FIRE HYDRANT
- WATER VALVE
- WATER METER
- GAS METER
- EXISTING POWER POLE
- EXISTING LIGHT POLE (FLIGHTS)
- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORM SEWER MANHOLE
- DROP BOX INLET (DBI)
- EXISTING TRANSFORMER PAD
- TELEPHONE PEDESTAL
- EXISTING TREE
- SPRINKLER HEAD
- EXISTING SIGN
- BORE HOLE
- DS DOWNSPOUT
- ELECTRIC JUNCTION BOX
- EXISTING GUIDE WIRE
- CO EXISTING CLEANOUT
- EXISTING BOLLARD
- EXISTING STRUCTURE (AS NOTED)
- EXISTING CONCRETE
- EXISTING GRAVEL
- EXISTING RIP RAP
- EXISTING LANDSCAPED AREA

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EXISTING TOPOGRAPHIC PLAN

JOB NO.	223-061
DATE	05-20-24
DRAWN	M. ALLEN
CHECKED	R. TUTT

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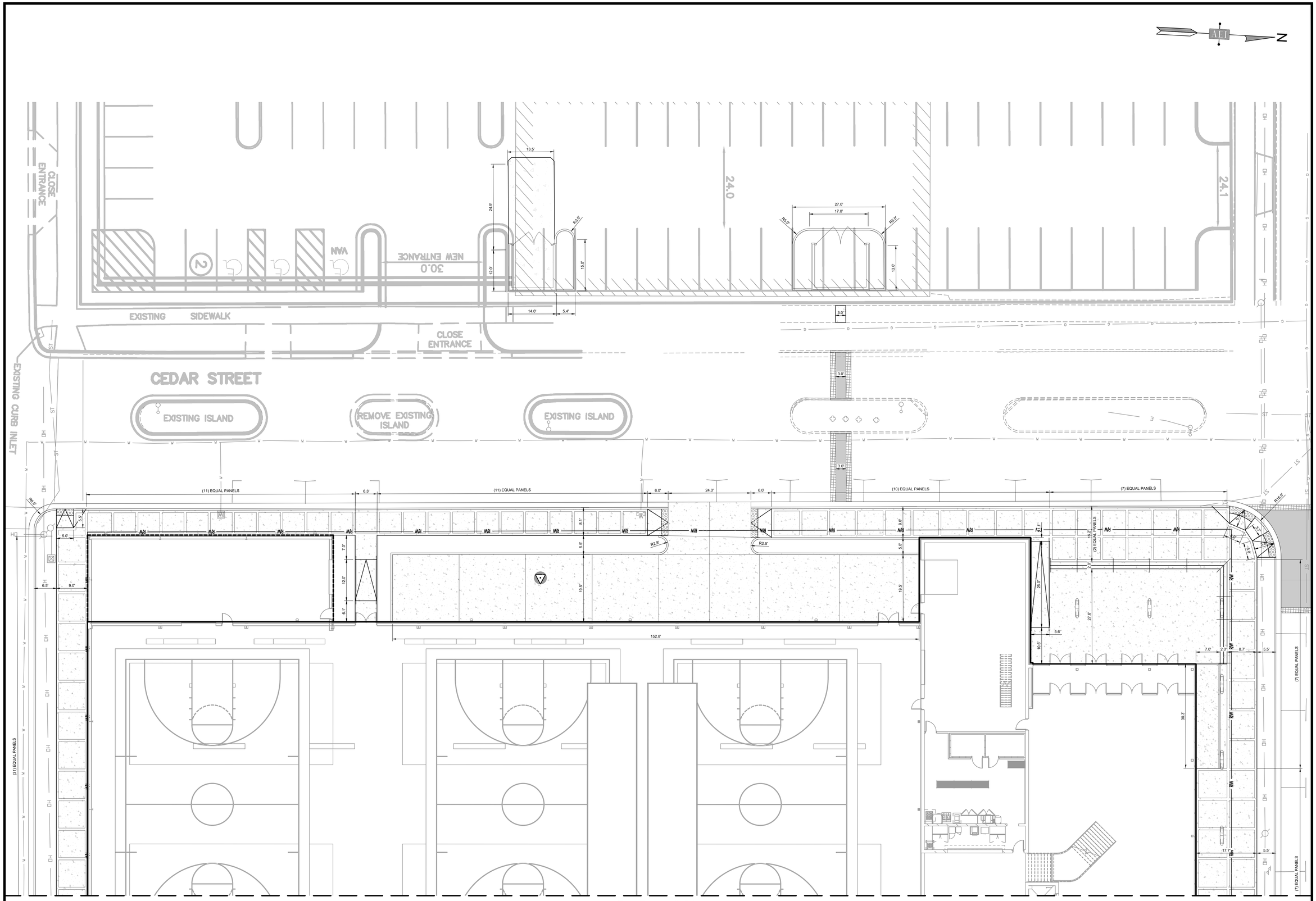

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DIMENSIONED SITE LAYOUT PLAN

JOB NO.	223-061
DATE	05-20-24
DRAWN	M. ALLEN
CHECKED	R. TUTT

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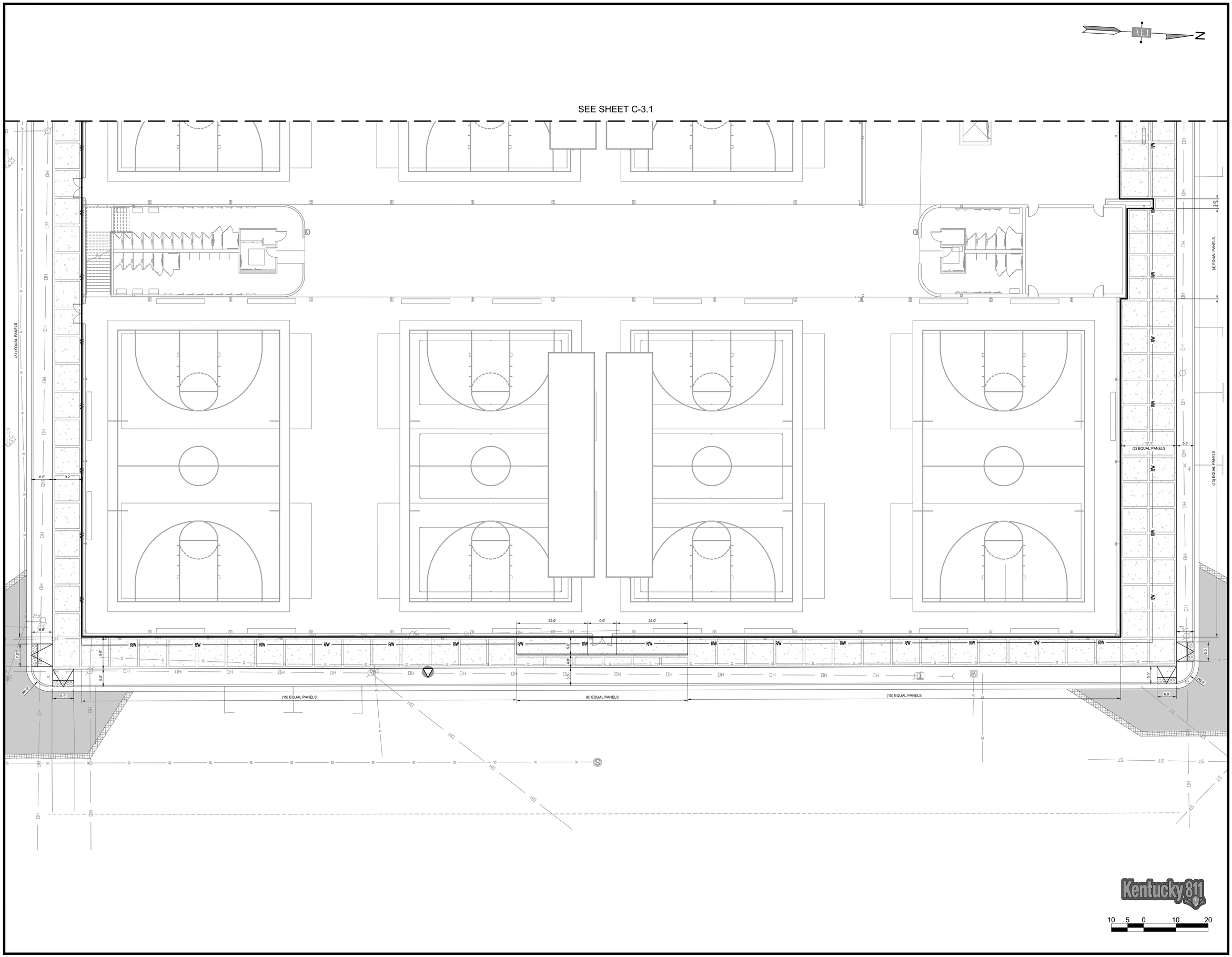

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DIMENSIONED SITE LAYOUT PLAN

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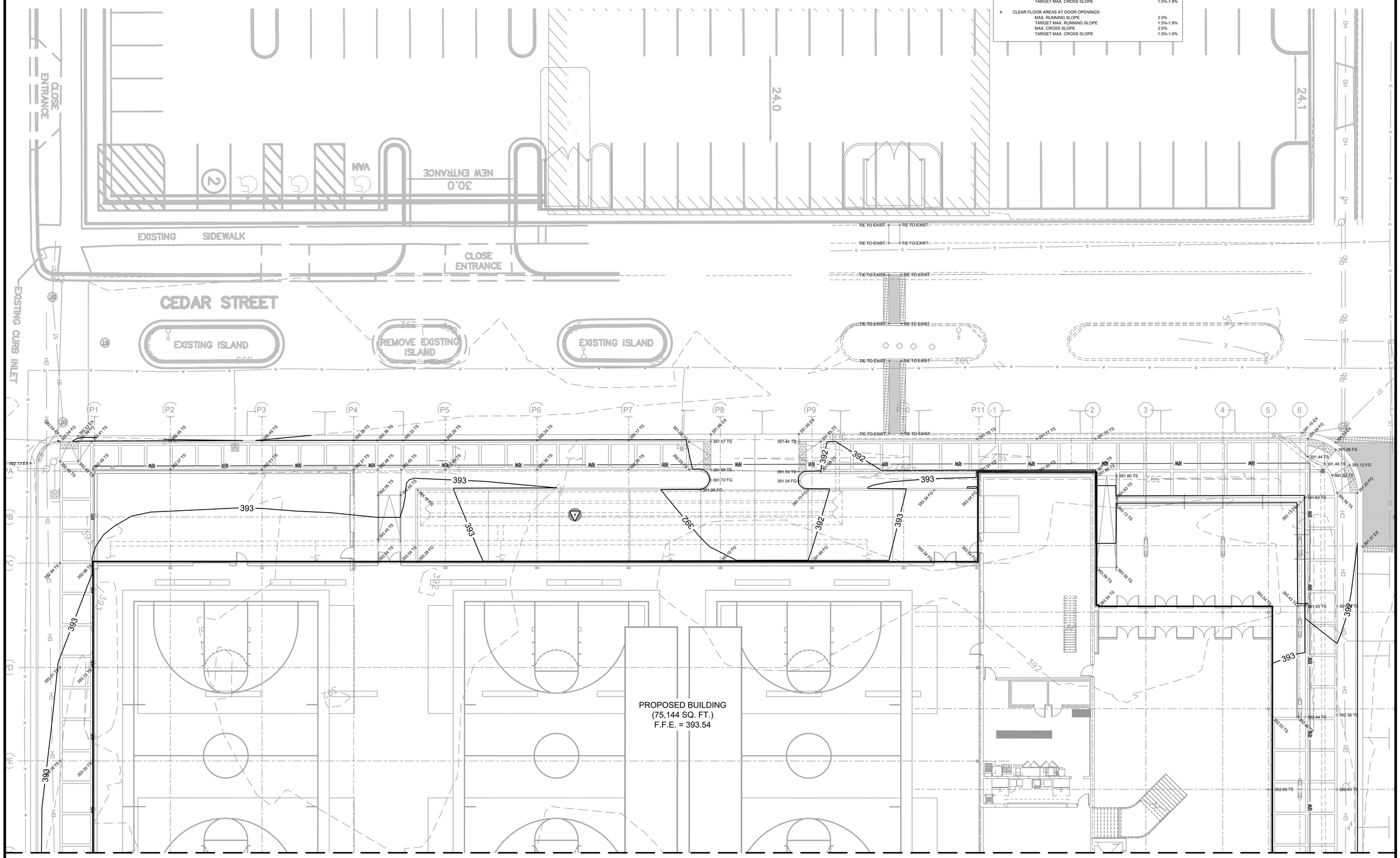
SYMBOLS THAT MAY APPEAR ON THIS PLAN	
SYMBOL	ABBREVIATION
XXX.XX FG	FINISH GRADE
XXX.XX EX	TIE TO EXISTING
XXX.XX TC	TOP OF CURB
XXX.XX BC	BOTTOM OF CURB
XXX.XX TS	TOP OF SIDEWALK
XXX.XX BS	BOTTOM OF SIDEWALK
XXX.XX TW	TOP OF WALL
XXX.XX BW	BOTTOM OF WALL

ADA GENERAL ACCESSIBILITY GUIDELINE NOTES:

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ADA COMPATIBILITY PRIOR TO CONSTRUCTION. IF ANY DISCREPANCIES ARISE, CONTACT THE ENGINEER IMMEDIATELY.

1. CURB RAMP-
   - MAXIMUM RUNNING SLOPE 8.33%
   - TARGET MAX. RUNNING SLOPE 7.5%-8.0%
2. ACCESSIBLE PARKING PAD:
   - MAX. CROSS SLOPE IN ANY DIRECTION 2.0%
   - TARGET MAX. CROSS SLOPE IN ANY DIRECTION 1.5%-1.9%
3. CROSSWALKS AND ACCESSIBLE ROUTES:
   - MAX. RUNNING SLOPE 5.0%
   - TARGET MAX. RUNNING SLOPE 4.5%-4.9%
   - MAX. CROSS SLOPE 2.0%
   - TARGET MAX. CROSS SLOPE 1.5%-1.9%
4. CLEAR FLOOR AREAS AT DOOR OPENINGS:
   - MAX. RUNNING SLOPE 2.0%
   - TARGET MAX. RUNNING SLOPE 1.5%-1.9%
   - MAX. CROSS SLOPE 2.0%
   - TARGET MAX. CROSS SLOPE 1.5%-1.9%



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ENLARGED GRADING PLAN

JOB NO.	223-061
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DRAWN	M. ALLEN
CHECKED	R. TUTT

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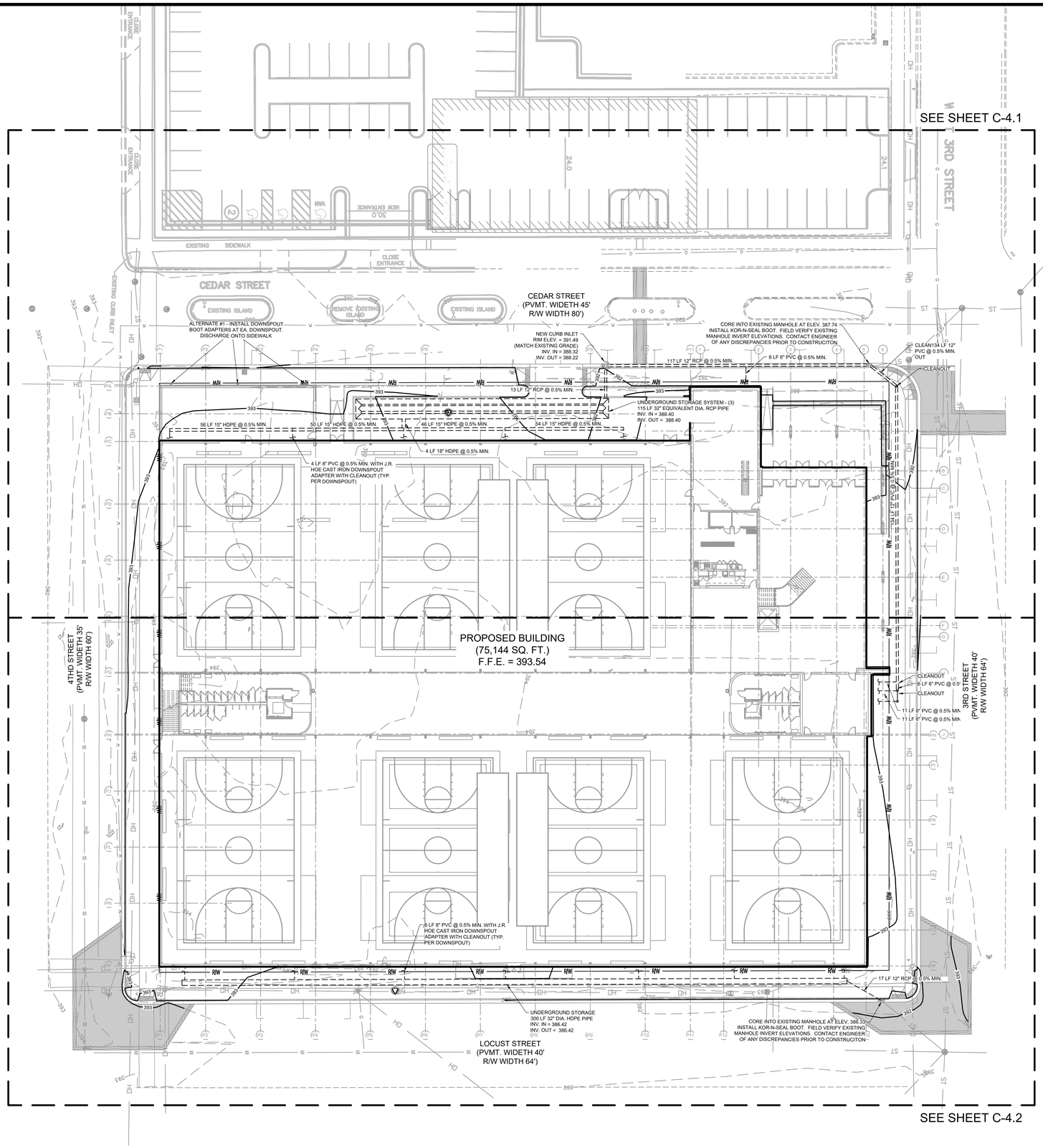

DRAINAGE STRUCTURE NOTES:

1. ALL LENGTHS OF SEWER PIPES ARE APPROXIMATES. CONTRACTOR SHALL PROVIDE PIPE MATERIALS AND FITTINGS AS NECESSARY TO COMPLETE STORM SEWER SYSTEM AS INDICATED OR REQUIRED.
2. ALL PIPES ENTERING STORM SEWER STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
3. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT.
4. ADJUST DRAIN FRAMES AND GRATES OR COVERS TO FINISH GRADE AND ENSURE THAT GRATES AND FRAMES ARE FIRMLY SEATED.
5. PROVIDE CONSISTENT SLOPE TO STORM DRAINAGE STRUCTURES. AVOID ABRUPT GRADE CHANGES ADJACENT TO DRAINAGE STRUCTURE.
6. ALL DOWNSPOUTS SHALL BE CONNECTED WITH DOWNSPOUT BOOT TO THE STORM SEWER SYSTEM.
7. THE FOUNDATION DRAIN SHALL BE CONNECTED TO STORM SEWER SYSTEM AS NECESSARY TO PROVIDE POSITIVE DRAINAGE.
8. ALL SIDEWALK AND CURB HEIGHTS ARE SIX (6) INCHES UNLESS NOTED OTHERWISE.
9. PROVIDE 5% MINIMUM SLOPE AWAY FROM BUILDING IN GRASS AREAS UNLESS NOTED OTHERWISE.
10. PROPOSED GRADE AROUND BUILDING SHALL BE 2 INCHES BELOW FINISH FLOOR MINIMUM UNLESS NOTED OTHERWISE.
11. CONNECT FOUNDATION DRAINS TO PROPOSED STORM SYSTEM.
12. REFER TO OWENSBORO METROPOLITAN PUBLIC IMPROVEMENT SPECIFICATIONS FOR ALL WORK IN THE RIGHT-OF-WAY.

ADA GENERAL ACCESSIBILITY GUIDELINE NOTES:

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ADA COMPATIBILITY PRIOR TO CONSTRUCTION. IF ANY DISCREPANCIES ARISE, CONTACT THE ENGINEER IMMEDIATELY.

1.	CURB RAMP:	
	MAXIMUM RUNNING SLOPE	8.33%
	TARGET MAX. RUNNING SLOPE	7.5%-8.0%
2.	ACCESSIBLE PARKING PAD:	
	MAX. CROSS SLOPE IN ANY DIRECTION	2.0%
	TARGET MAX. CROSS SLOPE IN ANY DIRECTION	1.5%-1.9%
3.	CROSSWALKS AND ACCESSIBLE ROUTES:	
	MAX. RUNNING SLOPE	5.0%
	TARGET MAX. RUNNING SLOPE	4.5%-4.9%
	MAX. CROSS SLOPE	2.0%
	TARGET MAX. CROSS SLOPE	1.5%-1.9%
4.	CLEAR FLOOR AREAS AT DOOR OPENINGS:	
	MAX. RUNNING SLOPE	2.0%
	TARGET MAX. RUNNING SLOPE	1.5%-1.9%
	MAX. CROSS SLOPE	2.0%
	TARGET MAX. CROSS SLOPE	1.5%-1.9%

SYMBOLS THAT MAY APPEAR ON THIS PLAN

SYMBOL	ABBREVIATION
XXX.XX FG	FINISH GRADE
XXX.XX EX	TIE TO EXISTING
XXX.XX TC	TOP OF CURB
XXX.XX BC	BOTTOM OF CURB
XXX.XX TS	TOP OF SIDEWALK
XXX.XX BS	BOTTOM OF SIDEWALK
XXX.XX TW	TOP OF WALL
XXX.XX BW	BOTTOM OF WALL

30 15 0 30 60

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GRADING & DRAINAGE PLAN

JOB NO.	223-061
DATE	05-20-24
DRAWN	M. ALLEN
CHECKED	R. TUTT

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SYMBOLS THAT MAY APPEAR ON THIS PLAN	
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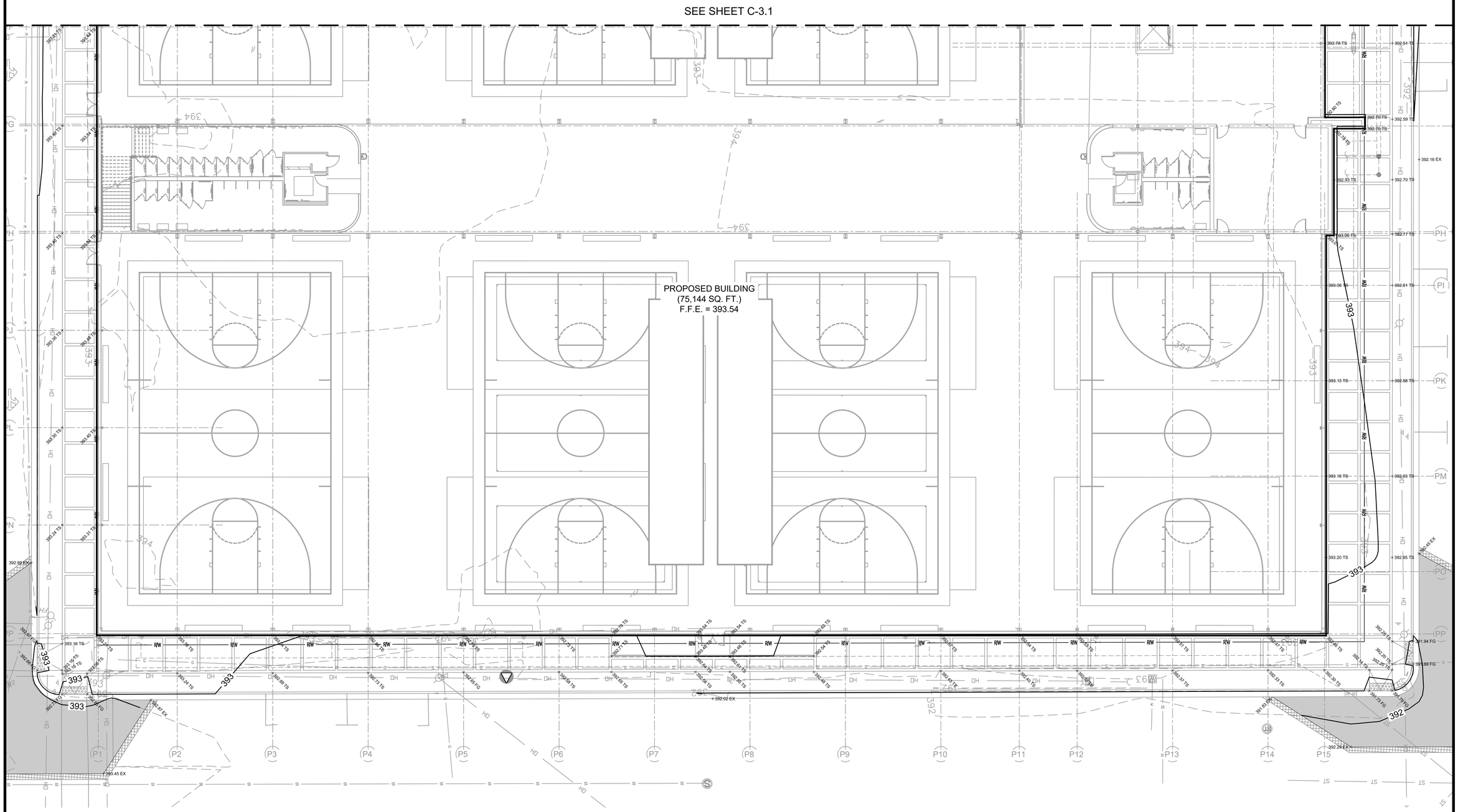
   - TARGET MAX. RUNNING SLOPE 1.5%-1.9%
   - MAX. CROSS SLOPE 2.0%
   - TARGET MAX. CROSS SLOPE 1.5%-1.9%



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ENLARGED GRADING PLAN

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DRAWN	M. ALLEN
CHECKED	R. TUTT

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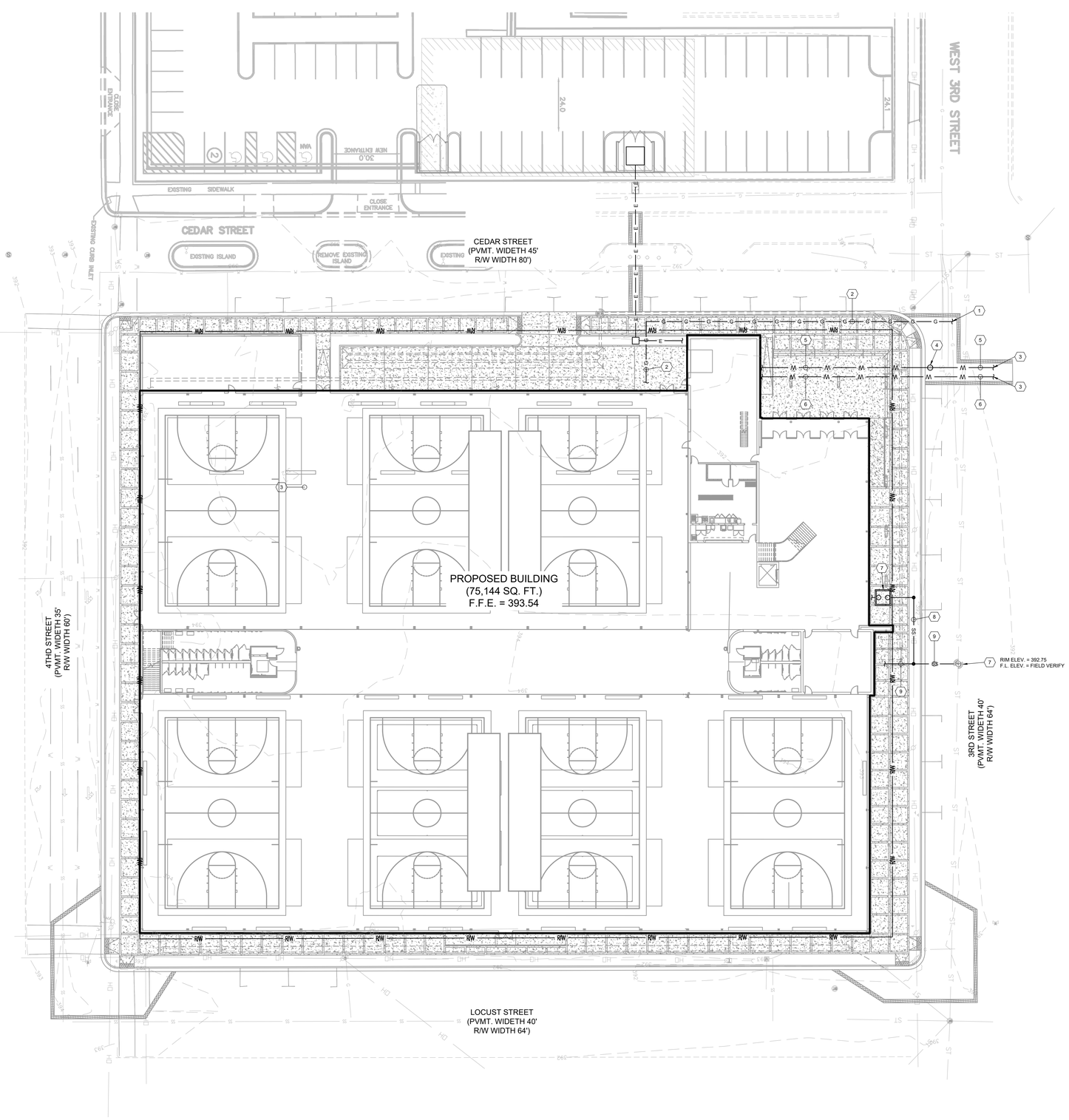

PROPOSED UTILITY LEGEND

—— SS ——	PROPOSED SANITARY SEWER
—— W ——	PROPOSED WATER SERVICE
—— E ——	PROPOSED UNDERGROUND ELECTRIC
—— G ——	PROPOSED UNDERGROUND GAS
—— T ——	PROPOSED COMMUNICATIONS

UTILITY NOTES:

1. THE CONTRACTOR IS ADVISED THAT ALL EXISTING UTILITIES SHOWN WERE FIELD SURVEYED BASED ON LOCATIONS PROVIDED BY EACH UTILITY COMPANY. OTHER UTILITIES MAY EXIST THAT ARE UNMAPPED. THE CONTRACTOR IS ADVISED TO FIELD VERIFY ALL UNDERGROUND UTILITIES BY CONTACTING THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS TO EXCAVATION.
2. ALL UTILITIES TO BE CONSTRUCTED TO WITHIN 5' OF BUILDING.
3. BACK FILL OF ALL TRENCHES BENEATH STRUCTURES AND/OR PAVEMENT SHALL BE CRUSHED STONE OR SIMILAR MATERIAL AS APPROVED BY ENGINEER.
4. CONTRACTORS ARE ADVISED TO COORDINATE INSTALLATION OF ALL BURIED CONDUITS AND LINES SUCH THAT LINES WHICH CROSS ARE LAID BEGINNING WITH DEEPEST LINE FIRST.
5. DEPTH OF WATERLINE SHALL BE ADJUSTED AS REQUIRED TO ALLOW FOR SPECIFIED PLACEMENT OF SANITARY AND STORM SEWERS, BUT IN NO CASE LESS THAN 30".
6. TAPPING AND INSPECTION FEES TO BE PAID BY CONTRACTOR, METER FEES TO BE PAID BY OWNER.
7. CONTRACTOR SHALL COORDINATE WATER AND SEWER SERVICES CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL UTILITY COMPANY.
8. ALL TRENCHING, PIPE LAYING AND BACK FILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
9. CONTRACTOR SHALL OBTAIN APPROVAL FROM ALL GOVERNING AGENCIES HAVING JURISDICTION OF UTILITY SYSTEMS PRIOR TO INSTALLATION.
10. ALL GATE VALVES SHALL BE PROVIDED WITH VALVE BOX IN ACCORDANCE WITH WATER UTILITY STANDARDS.
11. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS AND SHALL BE CONSTRUCTED ACCORDING TO WATER DEPARTMENT STANDARDS.
12. ALL WATER AND SANITARY SEWER SERVICE LINES TO THE BUILDING(S) SHALL BE PROVIDED WITH A TEMPORARY PLUG (FOR OTHERS TO REMOVE AND EXTEND AS NECESSARY).
12. THE CONTRACTOR SHALL FLUSH AND TEST ALL NEW UTILITY LINES ACCORDING TO THE STATE DIVISION OF WATER OR LOCAL WATER CO. STANDARDS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS AND ELEVATIONS OF EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION. ANY CONFLICTS DISCOVERED AFTER CONSTRUCTION HAS BEGUN, SHALL BE CORRECTED AT CONTRACTORS EXPENSE.
14. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SEWER LINES IS TEN FEET OUTSIDE DIAMETER TO OUTSIDE DIAMETER. THE MINIMUM VERTICAL SEPARATION IS EIGHTEEN INCHES.
15. BEFORE YOU DIG: CONTRACTOR SHALL NOTIFY BUD, 1-800-752-6077 48 HOURS PRIOR TO EXCAVATION, TO LOCATE AND FLAG ALL UNDERGROUND UTILITIES WITHIN THE PROPOSED RIGHT OF WAY.
16. REFER TO OWENSBORO METROPOLITAN PUBLIC IMPROVEMENT SPECIFICATIONS FOR ELECTRICAL AND WATER STANDARD DETAILS.
17. REFER TO REGIONAL WATER RESOURCE AGENCY FOR SANITARY SEWER STANDARD DETAILS.

KEY NOTES

1. APPROXIMATE LOCATION OF GAS TIE-IN
2. GAS LINE INSTALLED BY ATMOS ENERGY. TRENCHING AND SLEEVING BY CONTRACTOR
3. APPROXIMATE LOCATION OF WATER HOT TAP
4. 3" TRAFFIC RATED WATER METER
5. 3" SDR-21 DOMESTIC WATER SUPPLY
6. 6" C-900 FIRE SUPPRESSION LINE
7. SANITARY SEWER MANHOLE
8. 4" SDR-35 SANITARY SEWER LINE @ 1.25% MINIMUM. REFER TO PLUMBING PLANS FOR CONTINUATION
9. 6" SDR-35 SANITARY SEWER LINE @ 1.25% MINIMUM. REFER TO PLUMBING PLANS FOR CONTINUATION
10. GREASE INTERCEPTOR. REFER TO PLUMBING PLANS FOR CONTINUATION
11. SANITARY SEWER CLEANOUT

40 20 0 40 80

SHERMAN CARTER BARNHART ARCHITECTS

STATE OF KENTUCKY RICHARD TUTT 16.2024 LICENSED PROFESSIONAL ENGINEER

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44 Aberdeen Drive Glasgow KY
270.651.7200

OWENSBORO INDOOR SPORTS FACILITY

500 W 3RD ST, OWENSBORO, KY 42301

SITE UTILITY PLAN

JOB NO.	223-061
DATE	05-20-24
DRAWN	M. ALLEN
CHECKED	R. TUTT

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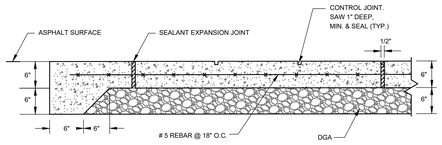
REVISIONS

No.	Description	Date

SHEET

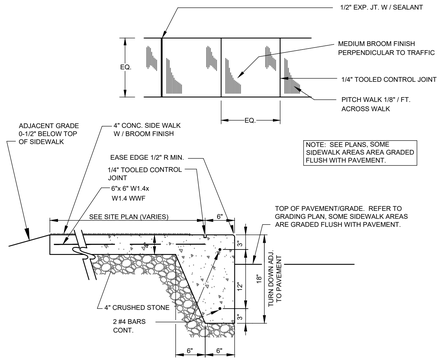
C-5.0



NOTES:
1. CONCRETE SHALL BE 4000 PSI AND MODULUS OF RUPTURE 650 PSI.
2. PROVIDE 1/2" EXPANSION JOINT SPACING WITH #5 BARS AT 18" O.C. EACH WAY (HEAVY BROOM FINISH).
3. PROVIDE 1/4" SAWN CONTROL JOINTS AT 25' O.C. MAX. SPACING.
4. PROVIDE EDGE EXPANSION JOINT AT STOOPS.
5. PROVIDE CONTROL JOINT SPACING AS FOLLOWS:
   6' FOR PAVEMENT 6' WIDE,
   8' FOR PAVEMENT 8' WIDE,
   10' FOR PAVEMENT 10' WIDE,
   12' FOR PAVEMENT 12' WIDE.
6. DGA SHOULD BE COMPACTED A MINIMUM OF 95 PERCENT OF THE MAXIMUM STANDARD PROTECTOR DRY DENSITY AS PER ASTM D-698. MOISTURE CONTENT SHALL BE WITHIN 4% OF OPTIMUM.

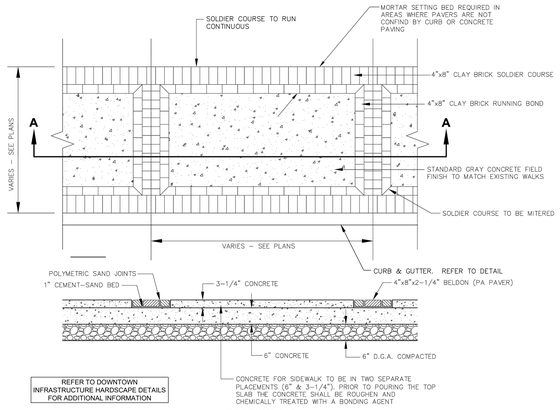
HEAVY DUTY CONCRETE PAVEMENT
DETAIL 1
N.T.S.

CONTRACTOR TO PROVIDE SMOOTH TROWLED CUSTOM 3" BORDER FOR CONCRETE PATTERN. WIDTH OF BORDER SHALL BE EQUAL AT EDGES AND TOOLED JOINTS. USE CUSTOM FINISHING TOOLS AS REQUIRED.



NOTE: SEE PLANS, SOME SIDEWALK AREAS AREA GRADED FLUSH WITH PAVEMENT.

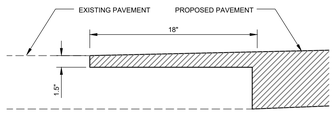
SIDEWALK
DETAIL 2
N.T.S.



SECTION A-A

SIDEWALK PAVING CONDITION TYPE 3
WITH BANDING LAYOUT
NOT TO SCALE

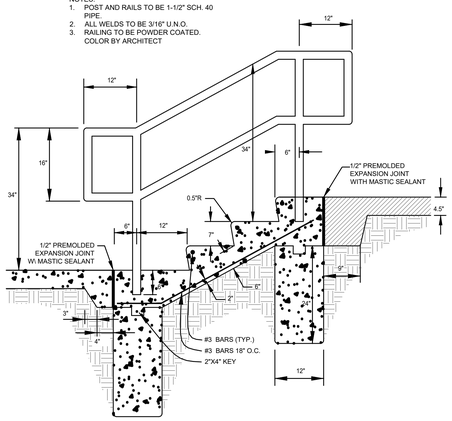
SIDEWALK WITH PAVER FRAME
DETAIL 3
N.T.S.



NOTE:
WORK UNDER THIS ITEM SHALL INCLUDE CUTTING OUT THE EXISTING BITUMINOUS SURFACE TO A MINIMUM DEPTH OF 1.5" AND WIDTH AS SHOWN, SO THE NEW SURFACE WILL KEY INTO THE EXISTING SURFACE.

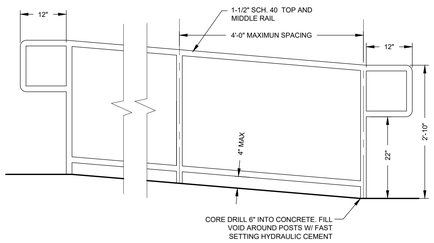
EDGE KEY
DETAIL 4
N.T.S.

NOTES:
1. POST AND RAILS TO BE 1-1/2" SCH. 40 PIPE.
2. ALL WELDS TO BE 3/16" U.N.O.
3. RAILING TO BE POWDER COATED. COLOR BY ARCHITECT

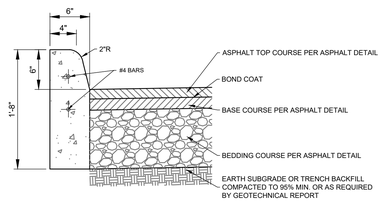


CONCRETE STEPS
DETAIL 5
N.T.S.

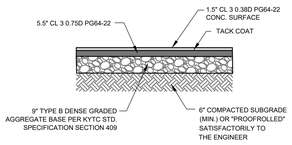
NOTES:
1. POST AND RAILS TO BE 1-1/2" SCH. 40 PIPE.
2. ALL WELDS TO BE 3/16" U.N.O.
3. RAILING TO BE POWDER COATED. COLOR BY ARCHITECT



HANDRAIL
DETAIL 6
N.T.S.

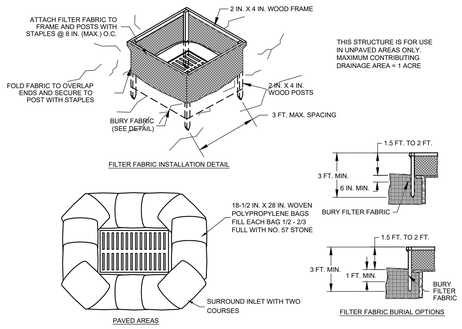


HEADER CURB
DETAIL 7
N.T.S.



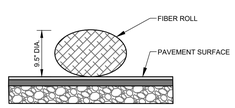
HEAVY DUTY BITUMINOUS PAVEMENT
DETAIL 8
N.T.S.

CONSTRUCT DOWNSTREAM DIKE WHEN REQUIRED TO PREVENT BY-PASS FLOW.

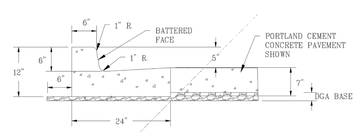


INLET PROTECTION
DETAIL 9
N.T.S.

NOTE: FIBER ROLL PROTECTION PLACED IN ASPHALT LOCATIONS SHALL HAVE SAND BAGS PLACED AT POINTS ALONG THE BARRIER. BAGS ARE INTENDED TO PREVENT MOVEMENT AND PROVIDE STABILIZATION FOR THE FIBER ROLL DEVICE AND SHALL BE PLACED ON TOP, PERPENDICULAR TO RUN. SAND BAG PLACEMENT NOT MORE THAN 8 FEET APART.



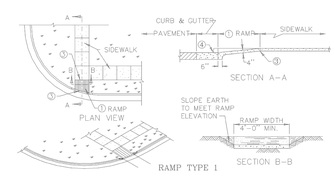
FIBER ROLL
DETAIL 10
N.T.S.



R/W CURB & GUTTER
DETAIL 11
N.T.S.

NOTES

RAMPS SHALL BE PAID PER SQ. YARD OF 4" CONC. SIDEWALK AND THE UNIT PRICE SHALL INCLUDE ALL MATERIALS, FORMS, AND INCIDENTALS NECESSARY FOR CONSTRUCTION. THE RAMP SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE. A BROOM FINISH OR EQUAL NON-SKID FINISH IS REQUIRED.
THE NORMAL GUTTER LINE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
RAMPS SHOULD BE LOCATED WITHIN MARKED LIMITS OF CROSSWALKS.
USE RAMP TYPE 3 WHEN POINT A TO B IS LESS THAN 20 FEET.
USE RAMP TYPE 4 WHEN POINT A TO B IS 20 FEET OR MORE.
① MAX. RAMP SLOPE 12:1.
② CURB RETURN REQUIRED WHEN UTILITY STRIP IS 4 FEET OR GREATER. FOR UTILITY STRIP LESS THAN 4 FEET, THE AREA IS TO BE SURFACED WITH SIDEWALK WITHIN THE RAMP.
③ 1/2" EXPANSION JOINT AT BACK OF CURB LINE AND AT SIDEWALK LINE.
④ NO BUMP PERMITTED. SAME SLOPE AS RAMP AND NOT TO EXCEED 1" IN HEIGHT.



R/W CURB RAMP
DETAIL 12
N.T.S.

SHERMAN CARTER BARNHART ARCHITECTS

STATE OF KENTUCKY RICHARD TUTT 10293 LICENSED PROFESSIONAL ARCHITECT

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270-651-7200

OWENSBORO INDOOR SPORTS FACILITY
500 W 3RD ST, OWENSBORO, KY 42301

CONSTRUCTION DETAILS

JOB NO.	223-061
DATE	05-20-24
DRAWN	M. ALLEN
CHECKED	R. TUTT

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REVISIONS

No.	Description	Date

SHEET
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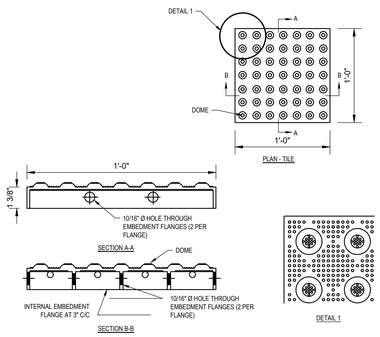
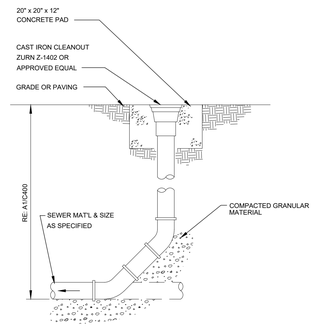
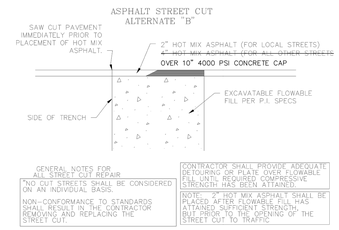


NOTES:
1. CAST IN PLACE TILE INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH ARMOR TILE SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. FOR CUSTOM SIZING CONTACT MANUFACTURER.
4. COLOR: COLONIAL RED

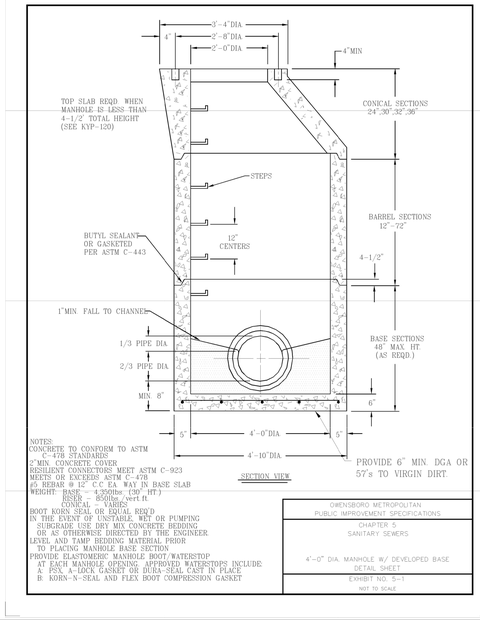
TACTILE WARNING STRIP DETAIL 1
N.T.S.



TYP. CLEANOUT DETAIL 2
N.T.S.

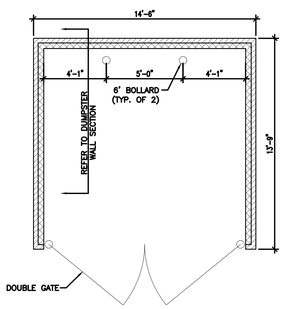


STREET CUT REPAIR DETAIL 4
N.T.S.

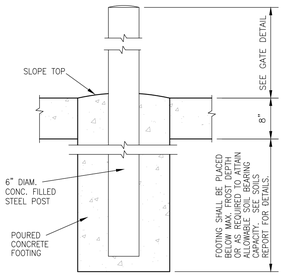


NOTES:
CONCRETE TO CONFORM TO ASTM C-478 STANDARDS
2"MIN. CONCRETE COVER
RESILIENT CONNECTORS MEET ASTM C-923
MEETS OR EXCEEDS ASTM C-478
#5 REBAR @ 12" C.C EA. WAY IN BASE SLAB
WEIGHT: BASE - 4,350lbs (30" HT.)
RISER - 850lbs./vert.ft.
CONICAL - VARIES
BOOT KORN SEAL OR EQUAL REQ'D IN THE EVENT OF UNSTABLE, WET OR PUMPING SUBGRADE USE DRY MIX CONCRETE BEDDING OR AS OTHERWISE DIRECTED BY THE ENGINEER.
LEVEL AND TAMP BEDDING MATERIAL PRIOR TO PLACING MANHOLE BASE SECTION
PROVIDE ELASTOMERIC MANHOLE BOOT/WATERSTOP AT EACH MANHOLE OPENING. APPROVED WATERSTOPS INCLUDE:
A. PSX, A-LOCK GASKET OR DURA-SEAL CAST IN PLACE
B. KORN-N-SEAL AND FLEX BOOT COMPRESSION GASKET

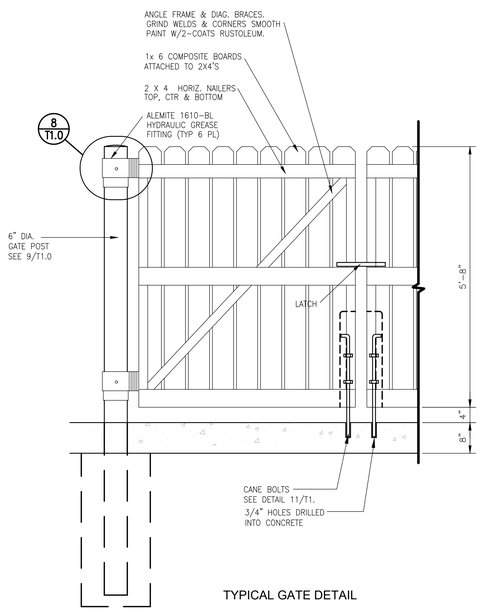
OWENSBORO METROPOLITAN
PUBLIC IMPROVEMENT SPECIFICATIONS
CHAPTER 5
SANITARY SEWERS
4'-0" DIA. MANHOLE W/ DEVELOPED BASE DETAIL SHEET
EXHIBIT NO. 5-1
NOT TO SCALE



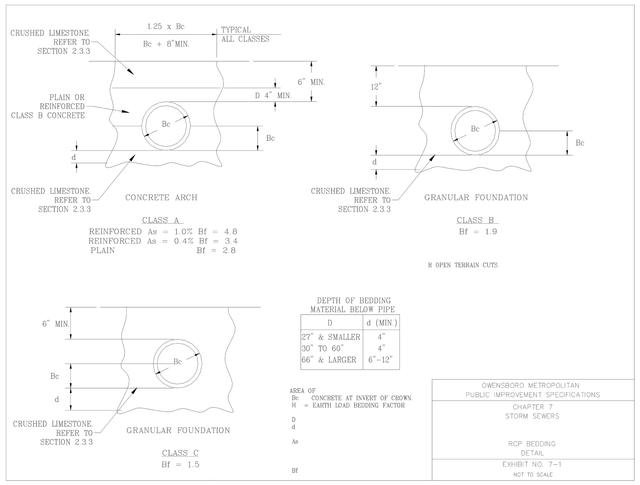
PLAN VIEW



GATE POST DETAIL



TYPICAL GATE DETAIL



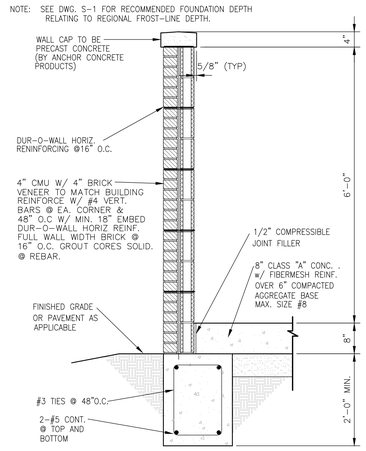
DEPTH OF BEDDING MATERIAL BELOW PIPE

D	d (MIN.)
27" & SMALLER	4"
30" TO 60"	4"
66" & LARGER	6"-12"

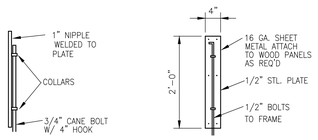
AREA OF
Bc = CONCRETE AT INVERT OF CROWN.
H = EARTH LOAD BEDDING FACTOR
D
d
As
Bf

OWENSBORO METROPOLITAN
PUBLIC IMPROVEMENT SPECIFICATIONS
CHAPTER 7
STORM SEWERS
RCP BEDDING DETAIL
EXHIBIT NO. 7-1
NOT TO SCALE

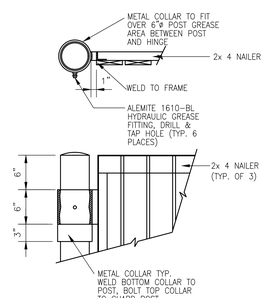
NOTE: SEE DWG. S-1 FOR RECOMMENDED FOUNDATION DEPTH RELATING TO REGIONAL FROST-LINE DEPTH.



WALL SECTION



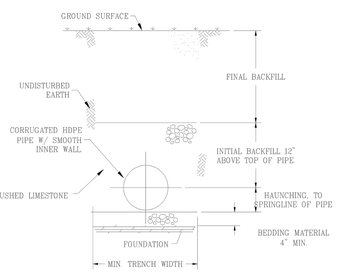
BOLT DETAIL



HINGE DETAIL

DUMPSTER ENCLOSURE DETAIL 3
N.T.S.

NOTES:
1. #57 crushed stone encasement. Place #57 crushed stone or equal in 6" maximum layers and work in around pipe by hand within the haunching zone.
2. For pipes with bells larger than the O.D. of the pipe barrel, provide bell holes in pipe bedding, no larger than necessary to ensure uniform pipe support. Fill all voids under bell by hand with bedding material
3. To prevent migration of fines and loss of pipe support for installations where significant groundwater flow is anticipated, such as if pumping methods are required to dewater the trench excavation below the water table, or if after construction, the permeable encasement will act as a french drain under high ground water levels, the entire perimeter of the #57 crushed stone encasement shall be wrapped with an approved geotextile fabric, or the pipe is to be bedded and backfilled with dense grade, brought up in 6" maximum layers and compacted to 90% standard density.
4. For installations where the trench bottom is unstable, undercut to a depth as required by the engineer, and replace with a foundation of #57 crushed stone or dense grade compacted in maximum six inch layers.
5. To prevent damage to pipe and disturbance of the pipe encasement, provide a minimum depth of cover of 24" above the top of the pipe before allowing construction equipment to traffic the trench surface.
6. Pipe joints to be bell and spigot with O'ring gasket meeting ASTM F477.
7. Pipe sizes 30" through 48" are for information only. These pipe sizes are only to be used in special circumstances, and at the approval of the Engineer.



TYPICAL TRENCH CROSS-SECTION
(N.T.S.)

Unless otherwise specified by the Engineer, Minimum trench widths shall be as follows:

NOMINAL DIAMETER (IN)	MIN. RECOMMENDED TRENCH WIDTH (IN)
4	21
6	23
8	25
10	28
12	31

NOMINAL DIAMETER (IN)	MIN. RECOMMENDED TRENCH WIDTH (IN)
15	34
18	39
24	48
SEE NOTE 7	
30	66
36	78
42	83
48	89

OWENSBORO METROPOLITAN
PUBLIC IMPROVEMENT SPECIFICATIONS
CHAPTER 7
STORM SEWERS
HDPE PIPE BEDDING DETAIL
EXHIBIT NO. 7-3
NOT TO SCALE

SHERMAN CARTER BARNHART ARCHITECTS

STATE OF KENTUCKY RICHARD R. TUTT LICENSED PROFESSIONAL ENGINEER

AEI AMERICAN ENGINEERS, INC.
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65 Ashcraft Drive Glasgow KY
270-651-7200

OWENSBORO INDOOR SPORTS FACILITY

500 W 3RD ST, OWENSBORO, KY 42301

CONSTRUCTION DETAILS

JOB NO.	223-061
DATE	05-20-24
DRAWN	M. ALLEN
CHECKED	R. TUTT

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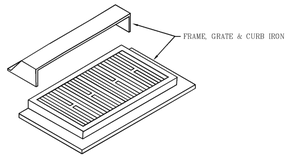
No.	Description	Date

SHEET

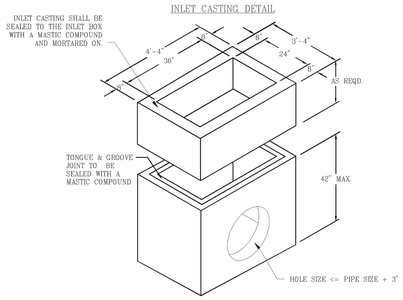
C-6.1

ACCEPTABLE CASTINGS
FOR CURB INLETS
- NEENAH R-3246
- EAST JORDAN 7030 M-4
- JOHN BOUCHARD & SONS 3080

ACCEPTABLE CASTINGS
FOR VALLEY INLETS
(IN DRIVEWAYS)
- NEENAH R-3510
- EAST JORDAN 7370



INLET CASTING DETAIL



INLET BOX DETAIL

NOTES:
CLASS A CONCRETE
2"MIN. CONCRETE COVER
OPENINGS FOR PIPE AS REQ'D.
REINF -#5 REBAR @ 12" C.C. EA. WAY
6" THICK BASE SLAB
WEIGHT: BASE - 3,600lbs.max
RISER - 300lbs./vert.ft.
FOR PIPES LARGER THAN 30", ADDITIONAL DESIGN IS REQUIRED

OWENSBORO METROPOLITAN PUBLIC IMPROVEMENT SPECIFICATIONS
CHAPTER 7 STORM SEWERS
INLET BOX AND CASTING DETAILS
EXHIBIT NO. 7-5
NOT TO SCALE

SHERMAN CARTER BARNHART ARCHITECTS

STATE OF KENTUCKY
RICHARD E. TUTT
LICENSED PROFESSIONAL ENGINEER

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44 Aberdeen Drive Glasgow KY
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No.	Description	Date

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CODES AND SPECIFICATIONS

A. GENERAL BUILDING CODE
The Contract Documents are based on the requirements of the Kentucky Building Code, latest Edition. This code shall include all addenda and amendments in force at the date of these documents unless noted otherwise.

B. CONCRETE CODES
The design, detailing and erection of all concrete elements shall additionally be based on the following:
1. Building Code Requirements for Reinforced Concrete (ACI 318-11), Specifications for Structural Concrete for Buildings
(ACI 301) and all other Committee Reports and Specifications as published by the American Concrete Institute including all amendments and addenda in force at the date of these documents.
2. Manual of Standard Practice, latest edition, as published by the Concrete Reinforcing Steel Institute (CRSI) including all supplements in force at the date of these documents.
3. Structural Welding Code, Reinforcing Steel, AWS D1.4 latest edition, American Welding Society.

C. MASONRY CODES
The design, detailing and erection of all masonry elements shall be based on the following:
1. Building Code Requirements for Masonry Structures (ACI 530-11).

D. STRUCTURAL STEEL CODES
The design, detailing and erection of all structural steel elements shall additionally be based on the following:
1. Specification for Structural Steel Buildings - Allowable And Plastic Design, latest edition as published by the American Institute of Steel Construction (AISC).
2. Specification for Structural Joints Using ASTM A325 or A490 Bolts, latest edition, as approved by the Research Council on Structural Connections.
3. Structural Welding Code - Steel, ANSI/AWS D1.1, American Welding Society.
All Codes and Specifications listed above shall include all amendments and addenda in force at the date of these documents.

E. PRECAST AND PRECAST-PRESTRESSED REQUIREMENTS
The design, detailing and erection of precast and precast prestressed elements shall additionally be based on the recommendations presented in the PCI Design Handbook, latest edition, as published by the Prestressed Concrete institute.

F. CONFLICTS IN STRUCTURAL REQUIREMENTS
Where conflict exists between the various publications as specified herein, the strictest requirements of the various publications shall govern. Where conflict exists between the various parts of the Contract Documents (Architectural Drawings, Structural Drawings, General Notes, Specifications) the strictest requirements shall govern.

DESIGN CRITERIA

A. DEAD LOADS
1. Dead Loads. Dead load materials assumed in the design are shown on the Architectural and Structural Drawings. Any changes in construction materials from those shown on the architectural or structural drawings shall be reported by the General Contractor to the Structural Engineer for verification of load carrying capacity of the structure.

B. LIVE LOADS
1. Principal design live loads are shown below. All live loads whether listed below or not are based on the requirements of the building code cited in these General Notes above unless the loads listed below are greater. Live load reduction as specified herein has been used unless specifically excluded below. Design live loads are based on the more restrictive of the uniform load listed below or the concentrated load listed acting over an area 2.5 square feet.

MINIMUM FLOOR LIVE LOAD

CATEGORY	UNIFORM LOAD (PSF)	CONCENTRATED LOAD (LB)
Roof	20	
Walways, Stairs and Lobbies	100	
Storage and Mechanical	125	
Typical 1st and 2nd Floor	100	

NOTE: See Sheets LP1-4 for additional information regarding Live Loads.

C. SNOW LOADS
Snow loads used in the strength design of the building frame shall be based on the general building code referenced above. The snow load constants are as follows:
P_g = Ground Snow Load = 15 PSF
C_e = Exposure Factor = 1.0
I = Importance Factor =1.1
C_t= 1.0
Pf = Flat Roof Snow Load = 11.6 PSF

D. RAIN LOADS
Load = 5 PSF

E. WIND LOADS
Wind pressures used in the strength design of the building frame shall be based on the general building code referenced above.The wind load constants are as follows:
Basic Wind Speed: 115 MPH (Ultimate)
Exposure: B
I = Importance Factor = 1.0
Internal Pressure Coefficient (GC_{pi}) = +- 0.18
Components and Cladding:

(AREA D)

ROOF

AREA	Surface Pressure (PSF) 10 SF	Surface Pressure (PSF) 50 SF	Surface Pressure (PSF) 100 SF
Negative Zone 1	-23.6	-22.1	-21.5
Negative Zone 2	-41.2	-33.5	-30.2
Negative Zone 3	-60.9	-51.7	-47.7
Positive All Zones	16.0	16.0	16.0
Overhang Zone 2	-48.2	-48.2	-48.2
Overhang Zone 3	-81.0	-62.6	-57.7

WALL

AREA	Surface Pressure (PSF) 10 SF	Surface Pressure (PSF) 100 SF	Surface Pressure (PSF) 500 SF
Negative Zone 4	-28.0	-24.2	-21.5
Negative Zone 5	-34.6	-26.9	-21.5
Positive Zones 4&5	25.8	22.0	19.3

(AREA A,B,C)

ROOF

AREA	Surface Pressure (PSF) 10 SF	Surface Pressure (PSF) 50 SF	Surface Pressure (PSF) 100 SF
Negative Zone 1	-23.6	-22.1	-21.5
Negative Zone 2	-41.2	-33.5	-30.2
Negative Zone 3	-60.9	-51.7	-47.7
Positive All Zones	16.0	16.0	16.0
Overhang Zone 2	-48.2	-48.2	-48.2
Overhang Zone 3	-81.0	-62.6	-57.7

WALL

AREA	Surface Pressure (PSF) 10 SF	Surface Pressure (PSF) 100 SF	Surface Pressure (PSF) 500 SF
Negative Zone 4	-28.0	-24.2	-21.5
Negative Zone 5	-34.6	-26.9	-21.5
Positive Zones 4&5	25.8	22.0	19.3

F. SEISMIC LOADS
1. AREA D:
The seismic loads used in the strength design of the building frame shall be based on the general building code referenced above.
The seismic load constants are as follows:
S_{DS} = 0.283
S_{D1} = 0.198
Site Class = C
Seismic Design Category = C
Seismic Importance Factor = 1.25
Basic Structural System: Building Frame Systems
Seismic Resisting System: Steel Ordinary Concentrically Braced Frames
R = 3.25
Ω_0 = 2
C_d = 3.25
Base Shear =
Analysis Procedure: Equivalent Lateral Force

2. AREA D:
The seismic loads used in the strength design of the building frame shall be based on the general building code referenced above.
The seismic load constants are as follows:
S_{DS} = 0.283
S_{D1} = 0.198
Site Class = C
Seismic Design Category = C
Seismic Importance Factor = 1.25
Basic Structural System: Bearing Wall Systems
Seismic Resisting System: Ordinary Reinforced Masonry Shear Walls
R = 2
Ω_0 = 2.5
C_d = 1.75
Base Shear =
Analysis Procedure: Equivalent Lateral Force

3. AREA A, B, C: (PEMB)
The seismic loads used in the strength design of the building frame shall be based on the general building code referenced above.
The seismic load constants are as follows:
S_{DS} = 0.283
S_{D1} = 0.198
Site Class = C
Seismic Design Category = C
Seismic Importance Factor = 1.25
Basic Structural System: Building Frame Systems
Seismic Resisting System: Ordinary Concentrically Braced Frame
R = 3.25
Ω_0 = 2
C_d = 3.25
Base Shear =
Analysis Procedure: Equivalent Lateral Force

4. AREA A, B, C: (PEMB)
The seismic loads used in the strength design of the building frame shall be based on the general building code referenced above.
The seismic load constants are as follows:
S_{DS} = 0.283
S_{D1} = 0.198
Site Class = C
Seismic Design Category = C
Seismic Importance Factor = 1.25
Basic Structural System: Resisting Frame Systems
Seismic Resisting System: Steel Ordinary Moment Frames
R = 3.5
Ω_0 = 3
C_d = 3
Base Shear =
Analysis Procedure: Equivalent Lateral Force

FOUNDATION – GENERAL

A. GEOTECHNICAL REPORT
Foundation design is based on the geotechnical investigation (soil report) as follows:

REPORT OF GEOTECHNICAL ENGINEERING SUBSURFACE CHARACTERIZATION
SPORTSPLEX
OWENSBORO, KENTUCKY
PROJECT: 2305.0010.SHE
VECTOR ENGINEERS, INC.
MAY 27, 2023

The soil report is available to the General Contractor upon request to the Owner. The information included therein may be used by the General Contractor for his general information only. The Architect and Engineer will not be responsible for the accuracy or applicability of such data therein.

B. FOUNDATION APPROVAL AND INSPECTION BY GEOTECHNICAL ENGINEER
Unless authorized otherwise by the Owner or Architect, the General Contractor shall notify the Geotechnical Engineer for review of foundation bearing surface, inspection of foundation installation and foundation installation methods (including construction dewatering methods where required) and shall not place concrete prior to Engineer's approval.

C. SLAB-ON-GRADE CONSTRUCTION
1. Specifications. Unless specified otherwise, slab on grade construction shall follow the recommendations of Guide for Concrete Floor and Slab Construction ACI 302.1R.
2. Subgrade Preparation.
a. Areas containing slab on grade construction shall be stripped to sufficient depth to remove all vegetation, top soil, organic or other unsuitable materials.
b. Site excavated soil may not be used for slab on grade subgrade material without the approval of the Geotechnical Engineer.
c. All grade adjustments for slab on grade construction shall be accomplished with select fill as specified in these General Notes.
d. No slab on grade concrete shall be poured against a final prepared subgrade containing free water, ice, frost, mud or other unsuitable material.
3. Reinforcing Steel.
a. See the drawings for typical slab reinforcement requirements.
b. All welded wire fabric shall be furnished in flat sheets. Lap ends and sides one cross wire spacing plus 2" at splices.
c. Lap continuous slab on grade reinforcing steel 30 bar diameters at splices but not less than 12".
d. All reinforcing steel and welded wire fabric for slabs on grade shall be chaired with slab bolsters designed for support on soil to provide specified cover to reinforcing steel.
4. Construction and Control Joints. See details on the drawings for requirements of construction and control joints for slab-on-grade construction.

D. SELECT FILL
1. Select fill material shall be placed in maximum 8" loose lifts and compacted to 98% of Standard Proctor Density (ASTM D698) at ± 2% of optimum moisture. General Contractor to verify with Geotechnical Engineer.

AUGERCAST PILE FOUNDATION

A. FOUNDATIONS
These Contract Documents have been prepared using an augercast pile foundation with a capacity and depth as specified below.

B. PILE CAPACITY AND LENGTH
1. Pile Capacity
Pile compression capacity shall be 100 Tons working load as indicated on the plans.
2. Pile Length.
The length of the piles shall be 65 feet in length as indicated on the plans.

C. PILE SIZE
Augercast piles shall be 16 inches in diameter. See plans for reinforcing.

CONCRETE

A. CLASSES OF CONCRETE
All concrete shall conform to the requirements as specified in the table below unless noted otherwise on the drawings:

USAGE	28 DAY COMP. STRENGTH (PSI)	CONC. TYPE	MAX. SIZE AGG.	REMARKS
1. Footings	4000	NW	1 1/2"	
2. Slab on Grades, Found. Walls	4000	NW	1"	
3. Pimbs - Supporting Steel Column	4000	NW	1"	
4. Micropiles	4000			Grout Mix

Notes: NW = Normal weight concrete
LW = Light weight concrete
All concrete shall be proportioned for maximum allowable unit shrinkage of 0.03% at 28 days as determined by ASTM C157.

B. CONCRETE MIX DESIGNS
1. Engineer Approval. Concrete mix designs must be submitted a minimum of 15 days prior to the start of the work for Engineer and Owner's testing laboratory approval prior to placement of concrete in the plant or field. Any adjustments in approved mix designs including changes in admixtures must be submitted in writing to the Engineer and Owner's testing laboratory for approval prior to use in the field.

REINFORCING STEEL

A. SPECIFICATION
1. Reinforcing Steel. All reinforcing steel shall conform to the Specification for Deformed and Plain Billet Steel Bars for Concrete Reinforcement, ASTM A615 Grade 60 unless noted otherwise on the drawings. All reinforcing steel required to be welded shall conform to ASTM A706 Specification for Low Alloy Steel Deformed Bars for Concrete Reinforcement.
2 Welded Wire Fabric. Welded smooth wire fabric for concrete reinforcement shall conform to the Specification for Welded Steel Wire Fabric for Concrete Reinforcement, ASTM A185 with a yield strength of 65,000 PSI. Welded deformed wire fabric for concrete reinforcement shall conform to the Specification for Welded Deformed Wire Fabric for Concrete Reinforcement, ASTM A497 with a yield strength of 70,000 PSI. All welded wire fabric shall be furnished in flat sheets only.
3 Wire. Smooth wire for spiral reinforcement shall conform to the Specification for Cold Drawn Wire for Concrete Reinforcement, ASTM A82 with a minimum yield strength of 70,000 PSI.
4. Lap splices shall be Class A unless noted otherwise.

B. REINFORCING STEEL COVERAGE
Reinforcing steel coverage should conform to the requirements specified below. Cover specified shall be considered minimums that may require increasing where reinforcing steel intersects for different member types. Cover in structural members not specified below shall conform to the requirements of ACI 318 unless specified otherwise on the drawings.
1. Foundation Members
a. Basement Walls - 2" dirt face, ¾" interior face, unless noted otherwise
b. Foundation Walls - 2" both faces
c. Sump Walls, Pit Walls - 2" both faces
d. Footings - 3" bottom and sides, 2" top
e. Interior Slab on Grade - 1" top cover for one layer of steel
- 1" top cover, 3" bottom cover for two layers of steel
f. Exterior Slab on Grade - 2" top cover for one layer of steel

CONCRETE MASONRY

A. CODES AND SPECIFICATIONS
All concrete masonry construction shall conform to the requirements of the local building code cited in these General Notes and the following codes:
1. Building Code Requirements for Concrete Masonry Structures, ACI 530-13.
2. Standard Building Code Requirements for Masonry Construction, The Masonry Society.

B. HOLLOW LOAD BEARING CONCRETE MASONRY UNITS
Unless noted otherwise on the Architectural Drawings or Specifications, all concrete block walls shall utilize hollow load bearing units (CMU) conforming to ASTM C90 Hollow Load Bearing Concrete Masonry Units, Type 1, Grade N. Unless specified otherwise, units shall be lightweight. Units shall be cured by autoclave treatment at a minimum temperature of 350 F and a minimum pressure of 125 psi, or cured in a moisture controlled atmosphere as specified for Type 1 units. The Contractor shall furnish all required sizes and shapes as required to complete the work.

C. GROUT
Grout for masonry construction shall comply with the requirements of ASTM C476, Standard Specification for Mortar and Grout for Reinforced Masonry.
1. Fine Grout. Fine grout containing sand, Portland cement and lime (lime is an optional ingredient) without coarse aggregate shall be used in grout spaces less than 2" in any horizontal direction unless otherwise specified.
2. Coarse Grout. Coarse grout containing sand, Portland cement, lime (lime is an optional ingredient), and coarse aggregate shall be used in grout spaces 2" or more in the least horizontal dimension unless indicated otherwise.
3. Strength. Grout shall attain a minimum 28 day compressive strength of 2500 psi using 3"x3"x3"f'" or 3"x3"x 6" test specimens cast in molds with a flat non-absorbent base and masonry units having the same moisture condition as those being laid forming the sides of the specimens. Specimens shall be capped according to ASTM C617 and tested according to ASTM C39.

D. PRISM STRENGTH
1. Compressive Strength, f'm.
The compressive strength of masonry construction, f'm shall be as indicated below:

	Class of Masonry	28 Day Compressive Strength, f'm
a. Single Wythe Hollow Masonry		2000 PSI

2. Prism Tests. Prism tests shall be made for each class of masonry on the project using an assembly of actual masonry units, mortar and grout as planned in the work. Tests shall be run according to the requirements of ASTM E447 Test Methods for Compressive Strength of Masonry Prisms.

E. HORIZONTAL JOINT REINFORCING AND TIES
1. Specification. All horizontal joint reinforcing and ties shall be butt-welded wire units fabricated from cold drawn steel wire complying with ASTM A82 Cold Drawn Steel Wire for Concrete Reinforcement. Fabricated units shall have deformed continuous side rods and plain cross rods and shall be prefabricated in straight lengths of not less than 10 feet. Out-to-out width of units shall be approximately 2" less than the nominal width of the wall positioned so that side rods have full embedment in mortar with mortar coverage of not less than 5/8" on joint faces exposed to the exterior and not less than ½" elsewhere. All units shall be fabricated from 9 gauge rods minimum unless noted otherwise. Exterior walls shall have units hot dip galvanized after fabrication to comply with ASTM A153, Class B-2 coating (1.5 oz. per sq. ft.). Interior walls in conditioned space shall have units that are mill galvanized according to ASTM 641 Class 3. Prefabricated matching corner ("L") and intersecting ("T") sections shall be used to form continuous reinforcement around all corners and for anchoring abutting walls and partitions.
2. Single-Wythe Masonry Walls. All single-wythe masonry walls shall be reinforced with ladder type or truss type units with a single pair of side rods and continuous diagonal or perpendicular cross rods attached to side rods no farther apart than 16" on center. Units shall be spaced in the wall at not more than 16" on center vertically.
3. Brick and Block Cavity Wall. All brick and block cavity walls shall be reinforced with ladder or truss type units in the back-up block wall having a single pair of side rods and continuous diagonal or perpendicular cross rods attached to side rods not farther apart than 16" on center. Units shall be spaced in the block wall at not more than 16" on center vertically. The outer brick wythe shall be tied to the block back-up wall with rectangular type adjustable wall ties manufactured from 3/16" diameter wire hot dip galvanized to comply with ASTM A153, Class B-2 coating (1.5 oz. per sq. ft.). One wall tie shall be provided for each 2.66 square feet of wall area spaced not farther apart than 16 inches vertically and 24" horizontally. Wall ties shall be placed in alternate courses from block wall horizontal reinforcing. Bed joints of opposing wythes shall not be farther apart vertically than 1½" either direction. Ties shall be sized to extend a minimum of 2" into the brick and block joints.
4. Additional Reinforcement at Top and Bottom of Walls. Provide horizontal wall reinforcement in the bed joint of the second course and top course of masonry in addition to the typical reinforcing specified above.
5. Additional Reinforcement at Wall Openings. Provide additional horizontal reinforcing in the first and second bed joints 8" apart immediately above lintels and below sills of all openings. Such reinforcement not otherwise continuous shall extend a minimum of two feet past the opening on each side. Horizontal wall reinforcement interrupted by the jamb of an opening shall have the cross rod or side rod bent and hooked at the jamb. Provide an additional rectangular adjustable tie at the jamb for each joint not containing the normal horizontal reinforcing unit.
6. Splices in Horizontal Wall Reinforcing. Horizontal wall reinforcing shall be spliced a minimum of 6" at splices.

F. STABILITY AND BRACING OF MASONRY WALLS DURING CONSTRUCTION
All masonry walls shown on the architectural and structural drawings have been designed to resist the required code vertical and lateral forces applied to them in the final configuration only assuming full bracing top, bottom, and/or side of wall as shown. It is the responsibility of the Contractor to properly and adequately brace all masonry walls at all stages during construction to resist erection loads and lateral loads that could possibly be applied prior to completion of construction.

ANCHOR RODS

A. SPECIFICATION
1. All anchor rods shall be made from threaded round stock conforming to ASTM F1554, Grade 36 steel unless indicated otherwise in the column schedule or detailed on the drawings. Grade 36 anchor rods shall conform with the ASTM F1554 S1 Supplemental Requirements for Weldability.
2. Anchor rods shall conform to ASTM F1554, S4 and S5 requirements for toughness.

B. NUTS
All nuts with anchor rods shall be hex head conforming to ASTM Specification A563, Grade A (Grade D or DH for Grade 105 Anchor Rods).

C. WASHERS
Washers for all base plates shall be as specified by AISC.

D. TEMPLATES
All anchor rods set in concrete shall utilize 1/8" thick steel templates same size as the base plate. Templates shall be detailed on the shop drawings.

E. MINIMUM ANCHOR ROD SIZE
Unless indicated otherwise in the Column Schedule or on the drawings, anchor rods shall be ASTM F1554 steel and size shall be ¾" diameter (1'-0" minimum embedment).

NON-SHRINK GROUT FOR BASE PLATES AND BEARING PLATES

A. TYPE
Grout for base plates and bearing plates shall be a non-metallic, shrinkage resistant, premixed, non-corrosive, non-staining product containing Portland cement, silica sands, shrinkage compensating agents and fluidity improving compounds.

B. SPECIFICATIONS
Non-shrink grout shall conform to Corps of Engineers Specification for Non-Shrink Grout, CRD-C621-83.

C. COMPRESSIVE STRENGTH
Twenty-eight day compressive strength as determined by grout cube tests, shall be 8,000 PSI.

D. PLACEMENT
Grout shall be placed in a fluid flowable state under baseplates that have a form built around them for grout confinement. Grout should be cured according to manufacturer's recommendations.

E. MINIMUM THICKNESS
Minimum thickness of grout under all baseplates and bearing plates shall be 1 1/2", unless specified otherwise on the drawings.

STRUCTURAL STEEL

A. SPECIFICATIONS
The design, fabrication and erection of all structural steel shall conform to the following:
1. Specifications for Structural Steel Buildings latest edition, published by the American Institute of Steel Construction (AISC).
2. Detailing for Steel Construction as published by AISC.
3. Engineering for Steel Construction as published by AISC.
4. Code of Standard Practice for Steel Buildings and Bridges (Latest Edition) as published by AISC (exceptions to this Code are noted below).

B. MATERIAL
1. ASTM Specification and Grade
Clearly mark the grade of steel on each piece, with a distinguishing mark visible from floor surfaces, for the purpose of field inspection of proper grade of steel. Unless noted otherwise on the drawings, structural steel shall be as follows:
a. W-Shape Beams. All W-Shape beams shall conform to ASTM A992 – Standard Specification for Steel for Structural Shapes for Use in Building Framing.
b. Edge Angles and Bent Plates. All edge angles and bent plates shall conform to ASTM A36.
c. Angle Hangers and Braces (Kickers). All hangers and braces (kickers) shall conform to ASTM A36.
d. Rolled Columns. All rolled columns shall conform to ASTM A992 – Standard Specification for Steel for Structural Shapes for Use in Building Framing.
e. Tube Sections. All square or rectangular tubing sections shall conform to ASTM A500, Grade B.
f. Connection Material.
(1) Beam Column Stiffener Plates and Doubler Plates. Beam column stiffener plates and doubler plates (if indicated) shall be the grade of steel to which they are connected (highest grade if more than one grade is used.)
(2) All connection material, except as noted otherwise herein or on the drawings, including bearing plates, gusset plates, stiffener plates, filler plates, angles, etc. shall be A36 steel unless a higher or matching grade of steel with the members connected is required by strength or stiffness calculation and provided the resulting sizes are compatible with the connected members.

C. CONNECTIONS
1. Typical connection details are indicated on the drawings.
2. a. The design of all steel connections for the project shall be performed under the direct supervision of a registered professional engineer in the state where the project is located, employed by the fabricator.
b. The fabricator's registered professional engineer shall submit complete design calculations for each connection. Such calculations shall show details of the assembled joint with all bolts and welds required. Where predesigned conditions are taken directly from tables in the AISC Manual, calculations need not be submitted provided the job design conditions precisely match those assumed in the AISC manual, all data extracted from the tables is clearly identified with the table number and all such connections are so indicated in the calculations submitted.
c. All design calculations shall be sealed by the fabricator's registered professional engineer.
d. Shop Drawings submitted without complete design calculations will not be approved.
3. Simple Beam Connections.
a. All typical beam simple connections shall be standard double angle or single angle framed beam connections using bolts as specified in Structural Bolts and Threaded Fasteners section of these General Notes.
b. Single plate "shear tab" connections may be used provided there is no axial force in the beam and they are designed strictly according to the procedures defined in "Allowable Stress Design of Simple Shear Connections" published by the American Institute for Steel Construction.
c. Simple Beam Design Capacity. Unless a larger reaction is shown otherwise on the plans, minimum design forces shall be a reaction R equal to one half the total uniform load capacity from the table of Allowable Loads on Beams in the AISC Manual Part 2 for given shape, span and grade of steel. Add to the reaction listed above, any loads or reactions of members supported by the beam within three feet of beam end and the vertical components of forces in brace members framing into the beam. Minimum reaction capacity shall be 12.0 kips and each connection shall contain not less than two bolts.
5. Base Plates and Bearing Plates.
a. Finish. All baseplates and bearing plates shall be finished in accordance with AISC Specification M2.8.
b. Attachment to Column. Unless shown otherwise on the drawings, all baseplates and bearing plates shall be welded all around to the column with minimum fillet welds as specified in AISC Table J2.4.
c. Setting Base Plates. Baseplates shall be set to the elevation indicated on the drawings and leveled using steel shims (plastic shims will not be allowed) or by three leveling screws with weldments at the plate edges. Plates shall be supported by high strength non-shrink non-metallic grout after all protruding plates have been trimmed. Tighten anchor bolts after supported members have been positioned and plumbed.
d. Anchor Bolt Holes in Baseplates. Hole sizes in baseplates shall be made oversize per AISC: 3/8" thick plate washers shall be provided for oversized holes.

BOLT SIZE	HOLE SIZE
3/4" Diameter to 1" Diameter, Inclusive	Diameter + 5/16"
Over 1" Diameter to 2" Diameter Inclusive	Diameter + 1/2"
Over 2" Diameter	Diameter + 3/4"

6. Steel Shelf Angles. Shelf angles supporting face brick shown on the drawings to be continuous shall be furnished in one piece between brick control joints. See Architect's Drawings for control joint location. Provide a ¼" gap at each joint. The gap shall not be welded. Provide support for shelf angle not more than 1'-0" from each end and in between as shown on the drawings. Shelf angles shall be continuous around corners with corner joint complete penetration welded.

D. FABRICATION
1. Fabricate and assemble structural assemblies in shop to greatest extent possible. Fabrication of structural steel in accordance with AISC Specification and as indicated on approved final shop drawings. Fabricator shall coordinate joint fit-up procedures with erector. Provide camber in structural members where indicated. The General Contractor shall coordinate provision of all erection bolts, lifting lugs or other devices required for erection with the fabricator and the erector.
2. Dimensional Tolerances. Dimensional tolerances of fabricated structural steel shall conform to Section 6.4 of the AISC Code of Standard Practice.

E. GALVANIZING
1. Scope. Hot dip galvanize after fabrication all structural steel items and their connections permanently exposed to the outside, whether specified on the drawings or not. Such items include, but are not limited to:
a. Shelf angles
b. All embedded plates in concrete
c. Building skin support steel exposed to moisture outside the exterior waterproofing surface. Examine the architectural and structural drawings for other items required to be hot dipped galvanized. Galvanize all nuts, bolts and washers used in the connection of such steel. Field welded connections shall have welds protected with "Z.R.C. Cold Galvanizing Compound" as manufactured by the Z.R.C. Products Company.

F. SURFACE PREPARATION AND PAINTING.
1. Specification. Surface preparation, paint and painting practices shall conform to the Steel Structures Painting Manual, Volumes 1 and 2, as published by the Steel Structures Painting Council (SSPC).
2. Surfaces which are to be fireproofed with spray-on fireproofing or embedded in concrete shall not be shop painted. Do not paint top flanges of composite beams nor surfaces of members where welding or high strength friction bolting will occur.
Coordinate all shop painting of structural steel with architect's painting requirements as specified on the architectural drawings and in the specifications.

G. SUBMITTALS
1. Shop Drawings. All Structural Steel Shop Drawings shall be sealed by a registered professional engineer in the state where the project is located and shall be submitted for review and approval.

STRUCTURAL BOLTS AND THREADED FASTENERS

A. SPECIFICATION
1. F1852 Bolts. All bolts in structural connections shall conform to ASTM F3125, Grade F1852, Type 1, High Strength Bolts for Structural Steel Joints unless indicated otherwise on the drawings.
2. Bolts and Nuts, High Strength Bolts. Bolts and nuts for all high strength bolts shall be heavy hex head conforming to ANSI Standards B18.2.1 and B18.2.2. Nuts shall conform to ASTM A563, Standard Specification for Carbon and Alloy Steel Nuts.
3. Washers. All washers shall be circular, flat and smooth and shall conform to the requirements of Type A washers in ANSI Standard B23.1. Washers for high strength bolts shall be hardened and conform to ASTM F436, Specification for Hardened Steel Washers. Beveled washers for American Standard Beams and channels shall be square or rectangular, shall taper in thickness (16.23% slope) with an average thickness of 5/16". When an outer face of a bolted part has a slope grater than 1:20 with respect to a plane normal to the bolt axes, a beveled washer shall be used.
4. Structural Joints Using Bolts. The design and assembly of structural joints using any bolt types listed above shall conform to all requirements of the AISC Specification.
5. Structural Joints Using High Strength Bolts. The design and assembly of structural joints using high strength bolts shall conform to the Specification for Structural Joints Using ASTM A325 or A490 Bolts as approved by the Research Council on Structural Connections of the Engineering Foundation.

B. DESIGN
1. Minimum Bolt Diameter. Minimum bolt diameter shall be ¾ inch.
2. Connection Type. Unless noted otherwise on the drawings or in these General Notes, all bolted connections shall be bearing type connections using standard holes (hole diameter nominally 1/16 inch in excess of nominal bolt diameter) with threads included in the shear planes.
3. Shear Connection of Welded Moment Connected Pieces. All shear connections of welded moment c onnected pieces shall be slip critical connections using high strength bolts.
4. Simple Beams. Simple shear connections shall be capable of end rotations of unrestrained beams as specified in Section 1.15.4 of the AISC Specification.
5. Oversize, Short Slotted and Long Slotted Holes. The dimensions and washer requirements of oversize, short slotted, and long slotted holes shall conform to the High Strength Bolting Specification cited above.
6. Allowable Working Stresses. The allowable working stresses of bolts shall be as specified in the AISC Specification Table 1.5.2.1 and Tables 2 and 2A of the High Strength Bolting Specification cited above.
7. Minimum Strength of Bolted Connections. Unless noted otherwise on the drawings, all shop and field bolted connections shall develop as applicable the full tensile or compressive strength of the member. All members with bolted moment connections, noted on the drawings with "MC", shall be bolted to develop the full flexural capacity of the member, unless noted otherwise on the drawings.

C. INSTALLATION
1. Washers. Washers under the bolt head and/or nut shall be used as required by the bolt specification cited above.
2. Tightening of High Strength Slip Critical Bolts by Use of a Direct Tension Indicator.
a. All field bolting of high strength slip critical bolts shall use load indicator washers ("Coronet Load Indicators" as manufactured by Cooper and Turner, Inc. or "Bethlehem Load Indicator Washers" as manufactured by Bethlehem Steel Corp.) with hardened washers as specified by the manufacturer.
3. Bolt Lubrication. All bolts shall be well lubricated at time of installation. Dry, rusty bolts will not be allowed. Bolts or nuts shall be wax dipped by the bolt supplier or "*Johnson's* Stick Wax 140" shall be used with all bolts in the shop or field.
4. Impact Wrenches. Properly sized and lubricated air impact wrenches with adequate air pressure shall be utilized for all bolt installation.
5. New Bolts. All bolts shall be new and shall not be reused.

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GENERAL NOTES

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DATE	MAY 20, 2024
DRAWN	STAFF
CHECKED	TEL

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PRECAST CONCRETE

A. SPECIFICATIONS
In addition to the General Building Code and Specifications cited in theses General Notes, the design, fabrication and erection of all precast elements shall conform to the following:
1. Manual for Quality Control for Plants and Production of Precast Prestressed Concrete Products, PCI MNL 116 as published by the Prestressed Concrete Institute.
2. Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products, PCI MNL 117. Conflicting provisions or design procedures in ACI and PCI publications as cited at the beginning of these General Notes shall be interpreted by adhering to the stricter or more conservative publication.

B. DESIGN
1. Precast Details. Typical details for precast elements are shown on the drawings. Modifications to details shown must be submitted by the Precaster and approved by the Engineer prior to the preparation and submission of shop drawings.
2. Registered Engineer. The design of all precast units and connections not specifically detailed on the drawings shall be performed by or under the direct supervision of a registered professional engineer in the state where the project is located, employed by the Precaster. Precast members shall be designed for the dead loads of the members, live loads as outlined in these General Notes, construction loads and all handling and erection loads. See submittal requirements below.
3. Connections. Connection design for all precast members shall utilize an additional load factor of 1.33 as recommended by Section 6.3 of the PCI Design Handbook, Third Edition.

C. CONCRETE
Concrete shall conform to all requirements specified elsewhere in these General Notes and additional items specified herein.
1. Classes of Concrete

MEMBER	MIN. 28 DAY COMPRESSIVE STRENGTH (PSI)	CONC. TYPE	MAX AGGREGATE SIZE
Hollow Core	5000 psi	NW	1"

NW = Normal weight concrete
All concrete shall be proportioned for a maximum allowable unit shrinkage of 0.03% at 28 days as determined by ASTM C157.
2. Calcium Chloride. Calcium chloride or admixtures containing calcium chloride shall not be used in precast concrete.

D. CONCRETE FINISH
Refer to Specifications for concrete finish requirements.

E. BEARING PADS
1. Type. All bearing pads shall be AASHTO grade chloroprene pads manufactured from 100 percent chloroprene (neoprene) as the only elastomer. The pads shall conform to the requirements of the AASHTO Standard Specification for Highway Bridges, Section 25, Division 2. Provide pads with a shore A hardness durometer of sixty plus or minus five.
2. Design. The design of all bearing pads shall conform to the PCI Design Handbook, Third Edition, Section 6.5.8, except as noted below. The design bearing pressure shall not exceed 800 psi under total service load and 500 psi under dead load.
3. Submittals. The General Contractor shall submit the manufacturer's technical literature of all bearing pads for Engineer review.

F. ERECTION
1. Erection Design. The Erector shall submit for Engineer review complete design calculations and installation drawings of the erection process prepared by a registered professional engineer in the state where the project is located. Such calculations shall specify any temporary bracing required to maintain stability of the structure during the erection process and any other conditions of erection. The calculations shall show assumed loading, material strengths, stresses and size and location of required bracing.
2. Design Strength of Members. Precast units shall not be installed until the concrete has attained its design compressive strength.
3. Erector's Responsibilities. The Erector shall study the shop drawings and erection drawings prior to the installation of any precast units. The Erector shall check access, building lines, grades, bearing surfaces, anchor bolts and all other cast-in-place work for proper location, alignment and elevation and shall notify the General Contractor of all conditions requiring alteration for proper fit of the precast units. The erector shall handle and erect all members in the proper sequence and by the prescribed methods specified on the shop drawings and installation drawings. Precast units shall be adequately braced until all permanent connections are installed and all grout and topping slabs have cured for at least seven days. Additional bracing or shoring shall be provided for all unsymmetric members to prevent rotation during erection and pouring of topping slab. No single lees shall be used on the project.
4. Erection Tolerances. Precast units shall be erected to the tolerances as specified in Part 8 of the PCI Design Manual, Third Edition, unless indicated otherwise on the drawings. If the structure is found to be out of tolerance, erection shall be stopped and not continued again until proper positioning of the members has been achieved and can be maintained.

G. QUALITY ASSURANCE
1. General. The Precaster shall practice and maintain all quality control provisions as required by the PCI Plant Certification Program and as outlined in PCI MNL 116 and 117. The Precasters Quality Control Manual as practice shall be submitted for Engineer review.
2. Testing Laboratory Inspection. The Precaster shall plan for and cooperate with the Owner's testing laboratory in all inspection programs planned for the project.
3. Certified Inspector. The Precaster shall plan for and cooperate with the Certified Inspector commissioned to implement the inspection program required.
4. Products Not Meeting Specifications. Precast units that do not conform to all specified requirements including strength, tolerances, both fabrication and erection and finishes shall be rejected and replaced with units meeting all requirements of the Contract Documents, unless approval by the Engineer, Architect and Owner is obtained in writing for an authorized repair.

J. SUBMITTALS
1. Precast Unit Design. The Precaster's design of all precast elements shall be submitted for Engineer approval. Such calculations shall be performed by or under the direct supervision of a registered professional engineer in the state where the project is located. The calculations must be bound with the Engineer's signature, seal and date sealed on the cover sheet. Calculations must be indexed by precast element and arranged in a logical orderly fashion. Incomplete or partial submittals will be rejected. Where computer aided design is submitted, the input data must be included and output must be clear. At least one hand calculation must be submitted for each member type designed by computer.
2. Precast Erection Design. The Erector shall submit installation drawings and engineering calculations of the erection process sealed by a registered engineer in the state where the project is located for Engineer review.
3. Shop Drawings.
   a. Erection Drawings. The Precaster shall submit complete erection drawings showing dimensional plans, elevations, sections and details with precast unit marks for each element.
   b. Production Drawings (Shop Tickets). The Precaster shall submit production drawings of typical precast members showing dimensions, reinforcing steel, embedded items and all connections to adjacent precast members or other structures. Non-typical members shall be submitted upon request.
   c. Engineering Seal. All shop drawings shall be sealed by a registered professional engineer in the state where the project is located.

OPEN WEB STEEL JOISTS

A. GENERAL
1. Examine the structural drawings for joist type, size, number, spacing, special loading and required accessories.
2. Joist Types. All open web steel joists shall be one of the following types:
   a. K Series. All joists marked on the plan with a K series designation shall be parallel chord underslung (top bearing) and shall meet the requirements specified below.

B. CODES AND SPECIFICATIONS
Fabrication of open web steel joists shall comply with the following codes and specifications:
1. Standard Specifications, Load Tables and Weight Tables for Steel Joists and Joist Girders adopted by the Steel Joist Institute (SJI), Latest Edition.
2. Standard Specifications for Joist Girders, adopted by Steel Joist Institute, Latest Edition.
3. Recommended Code of Standard Practice for Steel Joists and Joist Girders, Latest Edition.
4. American Welding Society ANSI/AWS D1.1 Structural Welding Code - Steel or SJI Technical Digest #8, "Welding of Open Web Steel Joists", with successful passage of load tests as defined in the specifications.

C. FABRICATION AND ERECTION
1. Camber. Joists shall be cambered for 15 psf dead load. Provide standard SJI camber unless specified otherwise on the drawings. Review the Structural Drawings and Specifications for information concerning dead loads on members requiring other than standard SJI camber. Joist camber must be shown on shop drawings submitted for review. Camber not shown on shop drawings will be cause for rejection.
2. Splices. Splices in members of joists shall be designed and fabricated in accordance with SJI specifications except that splices in each of the two angles or bars of any member shall not occur at the same location, but shall be staggered a minimum of 6 inches.
3. Top Chord Extensions and Extended Ends. Provide top chord extensions and extended ends where shown on the architectural and structural drawings. Design and fabrication shall conform to SJI specification and load tables.
4. Bottom Chord Extensions. Joists shown with bottom chord extensions shall not have connections made until after the full dead load is applied.
5. Bridging. Provide horizontal or diagonal type bridging for all joists as required by SJI specification. The ends of all bridging lines terminating at walls or beams shall be anchored thereto at top and bottom chords. Provide all required bridging anchors. Examine the structural drawings carefully for special bridging requirements.
6. Ceiling Extensions. Provide ceiling extensions of sufficient strength to support ceiling construction in areas having ceilings attached directly to bottom chord.
7. Attachment to Joists.
   a. The Contractor shall ensure that no cuts or holes are made in the members of the erected joists for attachment of ceiling, ducts, pipes or any other items not specifically provided in the contract drawings. Use of power driven fasteners in the diagonal and bottom chord members of the joists is prohibited.
   b. The Contractor shall not hang any elements from the top or bottom chords of joist except ceiling, ducts, pipes or other items specifically shown on the Contract Documents, without the written authorization of the Engineer. All pipes, ducts and other mechanical, electrical and plumbing equipment suspended from the joists shall have the hanger attached at a joist panel point only. No mechanical, electrical or plumbing equipment shall be hung along the top or bottom chord between panel points except as approved otherwise in writing by the Architect/Engineer. All ceilings weighing 3 PSF or less may have the grid hung anywhere along the bottom chord. Ceilings weighing more than 3 PSF shall have the grid hung only at joist panel points. Heavy pipes, ducts or other equipment hung from bar joists may require additional joist reinforcement and shall be referred to the Engineer for framing.
8. End Supports and End Anchorage.
   a. Provide standard depth of bearing for all joists as shown below unless detailed other wise on the drawings: (1) All K Series - 2½"
   b. Provide flat bearing for all joists.
   c. Provide minimum end bearing on steel, concrete and masonry supports as required by SJI specifications. For joist spans less than sixty feet center joist bearing over the center of support unless detailed otherwise on the drawings. If two joist abut each other at the support, provide 1/4" space between joist ends centered over the support. If sufficient bearing does not exist, stagger the ends of each joist and center bearing over the center of support. All joists equal to or over 60 feet in length must have required bearing centered over the center of the support. Stagger joist ends as required to satisfy this requirement.
   d. Provide minimum end anchorage to steel and masonry supports as required by SJI specifications unless detailed otherwise on the drawings. Provide minimum 3/8" bearing plate with one ½" Diameter x 4" stud of sufficient plan size to maintain minimum required weld for all joists bearing on concrete.
9. Shop Paint. Provide all joists and accessories with one shop coat of paint as specified in SJI Standards. Prepare surface as required by paint manufacturers recommendations and provide a continuous dry paint thickness of not less than 0.5 mils.
10. Accessories and Attachments. Examine architectural, structural and mechanical drawings for any accessories or attachments required to be provided for steel joists.

D. DESIGN
1. The design of all open web joists shall conform to the codes and specifications cited above.
2. All joists shall carry the design loads as specified in the SJI load tables as the minimum requirement. Additionally, the joists shall be designed to carry any other load types and patterns as indicated on the structural drawings. Examine the structural drawings for any other loads required to be carried by any joist.
3. Any situation requiring headers for steel joists and not shown on the structural drawings shall be submitted to the Engineer for framing.

E. STABILITY DURING ERECTION
Where bar joists are utilized, and columns are not framed in at least two directions with structural steel members, a bar joist shall be field bolted at columns (each end of joist) to provide lateral stability during construction.

F. SUBMITTALS
1. Joist manufacturer shall submit the following for Engineer review and approval:
   Shop Drawings showing joist layout, connections and all accessories. The drawings shall also include joist length, camber, mark, number, type, location, spacing and bridging. Shop drawings not showing all information cited above will be rejected.

WELDING OF STRUCTURAL STEEL

A. CODE
All shop and field welding shall conform to all requirements in the Structural Welding Code -Steel, ANSI/AWS D1.1, as published by the American Welding Society (AWS).

B. WELDER CERTIFICATION
All shop and field welders shall be certified according to AWS procedures for the welding process and welding position used.

C. MINIMUM SIZE AND STRENGTH
1. Fillet Welds. Minimum size of fillet welds shall be as specified in Table 1.17.2A in the AISC Manual of Steel Construction.
2. Partial Penetration Groove Welds. The minimum effective throat thickness of partial penetration groove welds shall be as specified in Table 1.17.2B in the AISC Manual of Steel Construction.
3. Minimum Strength of Welded Connections. Unless noted otherwise on the drawings, all shop and field welds shall develop the full tensile strength of the member or element joined. All members with moment connections, noted on the drawings with "MC", shall be welded to develop the full flexural capacity of the member, unless noted otherwise on the drawings.

D. FILLER METAL REQUIREMENTS
1. Strength. Weld metal shall be as specified in AISC Manual of Steel Construction Table 1.5.3.
2. Electrodes. Electrodes for various welding process shall be as specified below:
   a. SMAW: E70XX low hydrogen
   b. SAW: F7X-EXXX
   c. GMAW: ER70S-X
   d. FCAW: E7XT-X
   e. Weathering Steel Electrodes shall conform to Table 4.1.4 of the AWS D1.1 Manual.

STEEL ROOF DECK

A. SCHEDULE
Provide, as specified below, steel roof deck with the indicated depth, design thickness, moment of inertia, positive section modulus, negative section modulus and suggested manufacturer:
(Roof deck: 2.0DA Dovetail acoustical deck painted)

LOCATION	DEPTH	THK.	MOMENT OF INERTIA	POSITIVE SECTION MODULUS	NEGATIVE SECTION MODULUS	REMARKS
Typical	2"	0.0358	0.472	0.343	0.334	Type DA

The deck(s) specified shall meet all requirements of the Steel Roof Deck Specifications of the Steel Deck Institute (SDI). Other manufacturers may be submitted for Engineer approval provided all the above requirements are satisfied.

B. SPECIFICATION
The design, fabrication and erection of all roof deck shall conform to the Steel Deck Institute Design Manual for Composite Decks, Form Decks and Roof Decks as published by the Steel Deck Institute (SDI).

C. GRADE OF STEEL
Steel deck shall be manufactured from steel conforming to ASTM Designation A611 for painted deck or A653 Structural Quality for galvanized deck or Engineer approved equal, having a minimum yield strength of 40,000 PSI.

D. FINISH
1. Galvanizing. Steel deck shall be galvanized with a protective zinc coating conforming to ASTM A653 G90 class.

E. ATTACHMENT
1. Screws.
   a. Typical Requirements (Type DA). Roof deck units shall be screwed to each structural support member using #12 TEK screws using 24.5/4 pattern. Screw spacing along the perimeter should be reduced to 24.5/6 pattern for a distance of 10 feet in from the deck edges.
   b. Side Laps. Side laps of adjacent units shall be fastened with #12 TEK screws so that spacing between supports and fasteners does not exceed 18 inches.
2. Minimum Bearing. Provide a minimum end bearing to 2" over supports.
3. End Laps. End laps of sheets shall be a minimum of two inches and shall occur over supports. Roofs having a slope of ¼ inch or more in 12 inches shall be erected beginning at the low side to insure that end laps are shingle fashion.
4. All ends of deck shall (except cantilever ends as specified) shall be supported continuously. Contact engineer for clarification, if required.

F. DECK SPANS
Metal deck spans shall not exceed the maximum center to center spans as required by SDI criteria. Where possible, all metal deck shall extend over three or more supports.

G. ACCESSORIES
Provide minimum 20 gauge ridge and valley plates, minimum 20 gauge cant strips, minimum 14 gauge sump pans, minimum 20 gauge inside or outside closure channels, minimum 20 gauge butt strips at change of deck directions, minimum 20 gauge filler sheets and rubber closures as required to provide a finished surface for the application of insulation and roofing.

H. SUBMITTALS
Shop Drawings. The metal deck manufacturer shall submit shop drawings showing complete deck layout, attachment details, accessories and other details for Engineer approval prior to start of erection.

PRE-ENGINEERED METAL BUILDING SYSTEM

A. SPECIFICATION
In addition to the General Building Code and Specifications cited in these General Notes, the design, fabrication and erection of all pre-engineered building components shall conform to the following:
1. Low-Rise Building Systems Manual, latest edition and addenda, as published by the MEtal Building Manufacturers Association.
2. Aluminum Construction Manual, latest edition and addenda, as published by the American Aluminum Manufacturers Association.
3. The metal building manufacturer shall be certified in accordance with the American Institute of Steel Construction (AISC) quality certification program, category MB for metal buildings. The manufacturer shall provide proof of certification of Owner's and Engineer's records.

B. LOADS
The structural design of all components of the pre-engineered building system shall satisfy the loading requirements of both these General Building Code cited above and the Low-Rise Building Systems Manual cited above. Where the loading requirements conflict, the load condition yielding the more conservative (i.e. stronger and/or stiffer) structural member design shall govern. The design loads shall include all loads specifically noted on these plans and details and the following:
1. It shall be the responsibility of the pre-engineered metal building design engineer to review all contract documents to determine the weight of all permanent building material and attachments (including mechanical systems and equipment, electrical systems and fixtures, plumbing, sprinklers, moveable partitions, athletic equipment, scoreboards, etc.).
2. Dead Loads.
   a. Building Dead Load. The weight of the building system including roof material, wall panels, roof and wall girts, insulation material, main framing elements, bracing members and connection material.
   b. Collateral Dead Load. The weight of additional permanent building materials such as sprinklers, mechanical systems, electrical systems, fire suppression systems, etc. The minimum collateral dead load shall be 10 psf. G.C. to coordinate/verify with PEMB supplier.
3. Live Loads. Roof and floor live loads shall be as defined above in these general notes and in the General Building Code.
4. Snow Loads. Snow loading shall be determined as required by the General Building Code cited above and the Low-Rise Building Systems Manual. The stricter loading requirements shall govern.
5. Seismic Loads. Seismic loading shall be determined as required by the General Building Code cited above and the Low-Rise Building Systems Manual. The stricter loading requirement shall govern.
6. Wind Loads. Wind Loading shall be determined as required by the General Building Code cited above and the Low-Rise Building Systems Manual. The stricter loading requirement shall govern.
7. Other Loads. See plans.
8. Loads applied to the Pre-Engineered Metal Building by the athletic equipment (See sheet S4.0).

C. DESIGN
1. Registered Engineer. The design of all building components and connections not specifically detailed on these drawings shall be performed by or under the direct supervision of a professional enfineer registered in the state where the project is located, employed by the building manufacturer. Components shall be designed for the dead loads of the members, dead and live loads as outlined in these General Notes, construction loads and all handling and erection loads. See submittal requirements below.
2. The building designer shall provide column base reaction loads to the Structural Engineer for use in design of the foundation system.
3. It shall be the responsibility of the metal building manufacturer to review the Architectural and Structural drawings. Where the design intent of the Architect and Structural Engineer is not clear or where the metal building manufacturer's layout differs from that indicated on the Architectural and Structural plans, the metal building manufacturer shall inform the Architect or Engineer prior to proceeding with any work. The Architect or the Structural Engineer shall clarify the design intent or discrepancy in writing to the building manufacturer, and the Architect's/Engineer's decision is final.
4. It shall be the responsibility of the metal building manufacturer to size and specify anchor bolt grade, size, quantity, layout and length.

D. SUBMITTALS
1. Erection Drawings. The manufacturer shall submit complete erection drawings showing dimensional plans, elevations, sections and details. Erection drawings shall show each type of structural building frame required and their location within the structure; details of anchor bolt settings and anchor bolt sizes and length (where required); sidewall, endwall and roof framing; diagonal bracing and location within the structure; metal floor deck and joist types; wall and roof insulation types; longitudinal and transverse cross sections; details of curbs, roof jackets and items penetrating the roof; trim, gutters, downspouts, liner panels, wall and roof coverings and all accessory items; materials; other pertinent information required for proper and complete fabrication, assembly and erection of a watertight metal building system. Erection drawings shall specify final conditions for bolt tightening and brace cable tensioning.
2. Engineering Seal. All shop drawings shall be sealed, signed and dated by a professional engineer registered in the state where the project is located.
3. Certification. The manufacturer shall provide written certification, signed and sealed by a professional engineer registered in the state where the project is located, attesting that the building design meets the specified loading requirements, the requirements of codes and authorities having jurisdiction at the project site, and other specified requirements.

E. HANDLING AND STORAGE
1. The metal building components shall be delivered or stored in such a way that they will not be damaged or deformed.
2. Stack material on platforms or pallets above grade and in such a manner that they will drain freely. Protect material with weather-resistant covering or under roof.
3. Damaged material must be reported to determine if replacement is required.

F. ERECTION
Install all metal building components in strict compliance with manufacturer's instructions, approved final shop drawings and the codes and specifications cited in these General Notes. Do not field cut or alter structural building members without prior written approval of both the building manufacturer and the Architect/Engineer.

MISCELLANEOUS

A. CONTRACT DOCUMENTS
It is the responsibility of the General Contractor to obtain all Contract Documents and latest addenda and to submit such documents to all subcontractors and material suppliers prior to the submittal of shop drawings, fabrication of any structural members and erection in the field.

B. DRAWING CONFLICTS
The General Contractor shall compare the Architectural and Structural drawings and report any discrepancy to the Architect and Engineer prior to the fabrication and installation of any structural members. Unless documented in writing otherwise by the Architect or Engineer, the General Contractor shall assume the stricter requirement of conflicting provisions on the Architectural and/or Structural Drawings and Specifications.

C. EXISTING CONDITIONS
The General Contractor shall verify all dimensions and conditions of any existing buildings at the job site and report any discrepancies from assumed conditions shown on the drawings to the Architect and Engineer prior to the fabrication and erection of any members.

D. RESPONSIBILITY OF THE CONTRACTOR FOR STABILITY OF THE STRUCTURE DURING CONSTRUCTION
All structural elements of the project have been designed by the Structural Engineer to resist the required code vertical and lateral forces that could occur in the final completed structure only. It is the responsibility of the Contractor to provide all required bracing during construction to maintain the stability and safety of all structural elements during the construction process until the structure is tied together and completed.

SUBMITTALS

A. SHOP DRAWING REVIEW
The Engineer will review the General Contractor's shop drawings and related submittals (as indicated below) with respect to the ability of the detailed work, when complete, to be a properly functioning integral element of the overall system designed by the Engineer. Before submitting a shop drawing or any related material to the Engineer, the General Contractor shall review each such submission for conformance with the means, methods, techniques, sequences, and operations of construction, and safety precautions and programs incidental thereto, all of which are the sole responsibility of the General Contractor; approve each such submission before submitting it; and so stamp each such submission before submitting it. The Engineer shall assume that no shop drawing or related submittal comprises a variation unless the General Contractor advised the Engineer otherwise via a written instrument which is acknowledged by the Engineer in writing. The shop drawing and related material (if any) called for are indicated below. In the event that the Engineer will require more than ten (10) working days to perform review, the Engineer shall so notify the General Contractor. The Engineer shall return shop drawings and related materials with comments provided that each submission has been called for and is stamped by the General Contractor as indicated above. The Engineer shall return without comment material not called for or which had not been approved by the General Contractor.

B. SHOP DRAWINGS
The General Contractor shall submit for Engineer review shop drawings for the following items:
1. Reinforcing Steel
2. Concrete Mix Design (#)
3. Bar Joists (*)
4. Structural Steel (*)
5. Roof Metal Deck
6. Precast Concrete Hollow Core (*)
7. Pre-Engineered Metal Building (*)

Items marked (*) shall have shop drawings sealed by a registered engineer in the state where the project is located. Items marked (#) shall be submitted for Engineers record only and will not have the Engineer's shop drawings stamp affixed. All shop drawings must be reviewed and sealed by the General Contractor prior to submittal. Contractor shall submit one set of sepias and two sets of blueline prints for all shop drawings specified to be returned by the Engineer.

C. REPRODUCTION
The use of reproductions of these contract documents by any contractor, subcontractor, erector, fabricator or material supplier in lieu of preparation of shop drawings signifies his acceptance of all information shown hereon as correct, and obligates himself to any job expense, real or implied, arising due to any errors that may occur hereon.

D. SUBMITTAL RESPONSIBILITY
Submittal review by Ted Lolley & Associates is for the general conformance with the information given and the design concept expressed in the structural plans and specifications and not for the purpose of determining the accuracy and completeness of dimensions and quantities which shall remain the responsibility of the Contractor. The review of submittals by Ted Lolley & Associates does not relieve the Contractor of responsibility to comply with the structural plans and specifications. Ted Lolley & Associate's review of the contractor's submittals does not constitute approval of the contractor's safety measures, nor does it constitute approval of the means and methods of construction.

SPECIAL INSPECTIONS

A. GENERAL
1. Owner: The Owner shall engage a Special Inspector as required by the governing building code. The purpose of the Special Inspection is to report and record construction procedures highlighting those that are not in accordance with the Contract Documents and the Contractor's erection and shoring plans.
2. Contractor. The special inspections do not relieve the Contractor from their responsibility to perform the work in accordance with the Contract Documents or to carry out their own quality control. The Contractor is responsible for scheduling inspections and tests. Sufficient notice and lead time must be allowed for the inspections and tests. Failure to do so may result in rework. The Contractor shall provide safe access to areas requiring inspection and tests. When deficiencies are discovered, the Contractor must take action to remedy the deficiencies as directed the Engineer whose seal is applied to these plans. Deficiencies that require re-analysis and redesign by the Engineer shall be paid for by the Contractor. The Contractor is responsible for testing services that are required for material submittals and are not part of the special inspection program, such as aggregate tests, concrete mix design, testing of controlled fill materials, and other items outlined in the specifications.

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GENERAL NOTES

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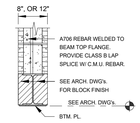
CONCRETE MASONRY UNIT (CMU) LOAD BEARING WALL SCHEDULE

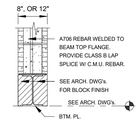
1. [ ] INDICATES WALL SIZE AND REINFORCING.
2. REINFORCING SHALL BE LOCATED IN CENTER OF WALL, UNLESS NOTED OTHERWISE.
3. CELLS WITH REINFORCING SHALL BE GROUTED SOLID, FULL HEIGHT.
4. ALL NON-LOADBEARING CMU (8" OR 6") SHALL BE REINFORCED WITH #4 AT 48" O.C., UNLESS NOTED OTHERWISE. (SEE SCHEDULE)
5. ALL CMU BELOW GRADE SHALL BE GROUTED SOLID.
6. SEE TYPICAL DETAILS FOR ALL OTHER INFORMATION.
7. FLUSH WALL PILASTERS:SHALL CONTAIN REINFORCING AS SHOWN BELOW. BARS SHALL BE CENTERED IN EACH CELL. MINIMUM LENGTH OF PILASTERS SHALL BE 1'-4", UNLESS NOTED OTHERWISE. UNLESS PILASTER NOTED OTHERWISE ON PLANS, REFER TO DETAILS 6, 7, 11 / S3.0.
8. SEE SHEARWALL DETAIL 14/S3.0 FOR ADDITIONAL INFORMATION REGARDING ALL SHEARWALLS. UNLESS NOTED OTHERWISE, ALL LOAD BEARING CMU/STRUCTURAL WALLS SHALL BE CONSIDERED SHEARWALLS.
9. ALL VERTICAL REINFORCING BARS SHALL BE POSITIONED UTILIZING BAR POSITIONERS TO ENSURE PROPER LAP SPLICE AND LOCATION.
10. SEE 12/S3.0 FOR TYPICAL CMU WALL CONSTRUCTION. PROVIDE BOND BEAMS AT 4'-0" (MAX.) ON CENTER VERTICALLY. 8" CMU TO RECEIVE 2-#4 CONT. BARS AND 10" & 12" CMU TO RECEIVE 2-#5 CONT. BARS.

MARK	CMU SIZE	VERTICAL REINFORCING	BOND BEAM	REMARKS
CMU1	12"	#6 AT 32" ON CENTER	2 - #5'S	
CMU2	8"	#5 AT 24" ON CENTER	2 - #4'S	

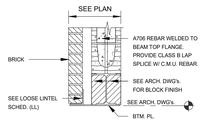
STRUCTURAL LINTEL SCHEDULE (SL)



TYPE "A1"



TYPE "A2"



TYPE "B"

MARK	TYPE	LINTEL / PLATE SIZE	REMARKS
SL-1	A1	W8x24 W/ 1/4"x11" BTM. PL.	
SL-2	A1	W8x24 W/ 1/4"x11" BTM. PL.	
SL-3	A2	W8x40 W/ 1/4"x11" TOP PL.	

NOTES:

1. WHEN SPAN EXCEEDS 6'-0" SHORE THE LINTEL DURING CONSTRUCTION.
2. GROUT ALL C.M.U. CELLS SOLID TO 1'-4" ABOVE THE LINTEL.
3. FPR TYPE B & C LINTEL, USE BRICK TIES AT 1'-4" O.C. TACK WELD TO BEAM WEB
4. BEAM PLATES SHALL EXTEND OPENING EDGE TO OPENING EDGE.
5. BEARING LENGTH ON EACH END SHALL EQUAL 1/12 x LINTEL SPAN (8" MIN.). INSTALL ON FRESH MORTAR BED.
6. WELD PLATES W/ MIN. 3/16" FILLET WELD, 3" LONG, AT 12" O.C. (TYP. MIN. WELD)
7. ALL LINTELS EXPOSED TO THE EXTERIOR SHALL BE GALVANIZED.
8. SEE THE ARCHITECTURAL PLANS AND THE STRUCTURAL PLANS FOR LOOSE STEEL LINTELS (LL) AS MAY BE REQUIRED TO SUPPORT FACE BRICK AND OTHER NON-LOAD BEARING MASONRY.

LOOSE STEEL (LL) LINTEL SCHEDULE

WALL TYPE	NOMINAL WALL THICKNESS	CLEAR MASONRY OPENING WIDTH	STEEL LINTEL SECTION
BRICK	4"	UP TO 6'-6"	4"x3 1/2"x5/16"(LLV) ANGLE
		UP TO 7'-6"	5"x3 1/2"x5/16"(LLV) ANGLE
		UP TO 8'-6"	6"x3 1/2"x5/16"(LLV) ANGLE
		UP TO 11'-0"	6"x3 1/2"x1/2"(LLV) ANGLE
CONCRETE MASONRY UNIT (CMU)	6"	UP TO 7'-0"	2-3 1/2"x2 1/2"x5/16"(LLV) ANGLES
	8"	UP TO 7'-6"	2-4"x3 1/2"x5/16"(LLV) ANGLES
		UP TO 8'-6"	2-5"x3 1/2"x5/16"(LLV) ANGLES
		UP TO 11'-0"	2-6"x3 1/2"x5/16"(LLV) ANGLES
	10"	UP TO 9'-6"	2-6"x4"x5/16"(LLV) ANGLES
		UP TO 11'-0"	2-7"x4"x5/16"(LLV) ANGLES
	12"	UP TO 7'-6"	3-4"x3 1/2"x5/16"(LLV) ANGLES
		UP TO 8'-6"	3-5"x3 1/2"x5/16"(LLV) ANGLES
		UP TO 11'-0"	3-6"x3 1/2"x5/16"(LLV) ANGLES

NOTES:

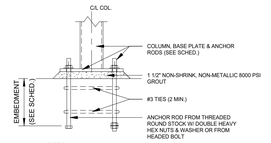
1. LINTELS CALLED OUT ON THIS SCHEDULE ARE FOR NON-LOAD BEARING MASONRY WALLS AND ARE FOR LOAD BEARING MASONRY WALLS WHERE STEEL LINTEL IS NOT REFERENCED AND THE LOAD IS INTRODUCED ABOVE THE LINTEL AT A DISTANCE GREATER THAN THE LINTEL SPAN.
2. CMU IS MASONRY MATERIAL COMPLYING WITH THE ASTM C90 SPECIFICATION. ALL CMU MATERIAL SHALL BE NORMAL WEIGHT UNLESS NOTED OTHERWISE.
3. PROVIDE MINIMUM 8" BEARING EACH END OF LINTEL. LINTEL BEARING LENGTH SHALL BE 1/12 LINTEL CLEAR SPAN.
4. ALL LINTELS EXPOSED TO THE EXTERIOR SHALL BE HOT-DIPPED GALVANIZED UNLESS NOTED OTHERWISE. ALL OTHER LINTELS SHALL BE PAINTED.
5. WHEN THE LINTEL CLEAR SPAN EXCEEDS 3'-6", SHORE THE LINTEL AT 4'-0" O.C. (MAX.) UNTIL ALL MORTAR AND GROUT HAVE REACHED 75 PERCENT OF SPECIFIED COMPRESSIVE STRENGTH.
6. CONTROL JOINTS AT MASONRY OPENINGS UTILIZING THE LOOSE STEEL LINTELS ON THIS SCHEDULE SHALL CONFORM TO THE TYPICAL DETAILS.
7. ANY LINTEL CONDITIONS NOT COVERED BY THIS SCHEDULE SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.

NON LOAD BRG. CMU REINF. SCHEDULE

NOM. CMU THICKNESS	REINFORCEMENT		REMARKS
	VERTICAL	BOND BEAM	
8" NON LOAD-BEARING	#4 @ 48" O.C.	2-#4 CONT.	
6" NON LOAD-BEARING	#4 @ 48" O.C.	1-#4 CONT.	

NOTES:

1. BOND BEAM REINFORCING DOES NOT REQUIRE HOOKS AT ENDS FOR NON LOAD BEARING WALLS, U.N.O.
2. ALL NON-LOAD BEARING TOP OF WALLS TO BE BRACED AT 36 x NOMINAL WALL THICKNESS. IF INTERSECTING WALLS EXCEED SPACING, BRACE ACCORDINGLY.



NOTES:

1. ALL ANCHOR RODS SHALL BE ASTM F1554 GRADE 36.
2. HEADED BOLT OR THREADED STOCK MATERIAL MUST BE USED FOR ANCHOR RODS

4 Typical Anchor Rod Detail
1" = 1'-0"

SHERMAN CARTER BARNHART ARCHITECTS

STATE OF KENTUCKY TED E. LOLLEY 15771 LICENSED PROFESSIONAL ENGINEER

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500 WEST THIRD STREET
OWENSBORO, KY 42301

SCHEDULES AND TYPICAL DETAILS

JOB NO.	22070
DATE	MAY 20, 2024
DRAWN	STAFF
CHECKED	TEL

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REVISIONS

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