Project: New Joplin Library
Site Civil/Landscape Construction Documents
Volume 2 of 2

Client: City of Joplin

EDA PROJECT #: 05-79-05345

Date: November 5, 2015

Civil Engineering and Landscape Architecture

ADDENDUM NO. 1

This addendum shall modify the drawings and specifications for volume 2 of 2 requirements as herein noted. This addendum, however, shall not relieve the General Contractor or his sub-contractors of any responsibility under the plans or specifications except as amended herein. Please regularly check the City of Joplin, Tri-State Engineering, and USA Print (417) 626-0966 for additional information.

General Clarification:

This project included a site grading package that is currently under construction by others. The Phase I grading plans have been included for reference in this addendum. The contours shown on the volume 2 of 2 plans are the contours that will be constructed by the Phase I contractor. The grades from phase 1 will be checked on a 25' grid to +/- 0.1'.

The following earthwork is to be performed in phase I construction.

The fill material under the proposed building is to be removed to natural soils. After the fill was removed it was either compacted or removed and replaced. This procedure included the area of the building perimeter and an additional 10' offset.

The top two feet (minimum) of the building pad was prepared using low volume change material. The area included the building perimeter and an additional two foot offset.

The quantities listed as unit price items in the bid form are to be utilized only at the request of the owner for construction beyond what is shown on the plans and specifications.

All asphalt shall utilize PG(64-22).

All trenches under paving or concrete shall be backfilled using aggregate backfill.

Each Charging Station note shall be replaced with the following.

Two Charging Stations:
Leviton, Evr-Green 4000 Dual Port Level 2 Public Use Charging Station (or approved equal)
CPMBX, Bollard Mounting Body
CPCBX, Cord Assembly
CPHG2, Dual Gateway
CPCAPB, Bollard Mounting Cap

Underground detention structures or aggregate fill shall not encroach within 4 feet of root ball of plantings.

Plans for Phase I site grading are attached for informational purposes.

Section 000700 Special Provisions:

13. Soils: The following shall be added to this section:

Contractor shall coordinate with Jasper County Staff to test all soils areas outside building and paved areas for heavy metals prior to placing topsoil or planting soils. Any area exceeding the City and County standards shall be removed and hauled to an approved repository.

Contractor shall coordinate with Jasper County Staff to test all soils areas outside building and paved areas for heavy metals after topsoil or planting soils have been placed. Any area exceeding the City and County standards shall be removed and hauled to an approved repository.

See attached letter regarding soils testing and remediation.

The following section shall be added to the Special Provisions.

14. Utility Connections:

The contractor is to assist the City in obtaining services as shown on the plans.

The City will be responsible for the cost of the following:

Water meter installation fees from Missouri American Water

Tap fees for water service from Missouri American Water.

Transformer Fees from Empire.

Gas meter installation fees from Laclede.

The contractor shall be responsible for all backflow devices and vaults or pads required by utility company.

The contractor shall be responsible for all service connection construction required beyond the meters set by utility companies.

The contractor shall be responsible for the Fire line beyond tap by Missouri American Water. Connection location and pressures shall be verified by the fire sprinkler contractor.

Section 321413.1 Permeable Pavers

Paver size shall be changed to 12" x 6"

Section 2656000 Exterior Lighting

See revised section for exterior lighting with Landscape Architects addendum section.

Plans Clarification or Amendments:

Sheet CS-02 Revise Drawing Title Name to "SITE CONDITIONS DEMOLITION & TEMPORARY FENCING PLAN".
Revised Temporary Fencing and notes.

Sheet CS-03 ADD Curb 32 L.F.+/- Infill along 20th Street.
Revised Charging Station Notes
Revised 20th Street Entrance

Sheet CS-04 Screen Wall located east along the bicycle racks, Top of Wall Elevation revised to 1042.70 from 1042.50.
Revised Grading in NW and SW corner
Revised 20th Street Entrance

Revised grading at northwest of parking area and alignment of wooden fence and grading area on southwest of building.

Sheet CS-06 Revised Charging Station Notes.

Sheet CS-07 Revised under drains for permeable pavers.
Add to area inlets in reading garden.

Sheet CS-10 ADD Temporary Fencing Detail.

Sheet CS-17 Staking Table Elevation Revisions on the following Staking Points: 318, 319, 321, 322, 351-353, 360, 377, 385-388, 401, 444, 470, 471, 475, 491, 493, 500, 527-531, 537-541, 582-584, 590, 598. Successful Bidding Contractor shall replace Sheet CS-17 and discard drawing CS-17.

Clayton L. Cristy P.E.
TRI-STATE ENGINEERING, INC.
702 S. Main Street
Joplin, Mo. 64802



Jasper County Health Department
105 Lincoln
Carthage, Missouri 64836
Phone: (417) 358-0480 Toll Free: (877) 879-9131
Fax: (417) 358-0494

ENVIRONMENTAL CONTAMINATION ORDINANCE REMEDIATION FORM

DATE: 2-7-13

PHONE: 417-624-0820

OWNER'S NAME: City of Joplin

SUBDIVISION NAME: _____

PROPERTY ADDRESS: 20th & Connecticut – All Library Affected Properties

CITY: Joplin STATE: MO ZIP: _____

MAILING ADDRESS: 602 S. Main St. 4th Floor

CITY: Joplin STATE: MO ZIP: _____

CONTRACTOR TO DO REMEDIATION: City of Joplin

PHONE: 417-624-0820

SITE TESTED POSITIVE FOR: ☐ LEAD _____ ppm

☐ CADMIUM _____ ppm

EXCAVATED AREA TESTED: _____

FILL TESTED: _____

Property owner's proposal for remediation of the site:

While this property is commercial and does not meet the definitions of a child occupied facility it will be remediated in the following manner.

- **No remediation will occur under Buildings, parking lots, or sidewalks.**
- **After construction of buildings, parking lots and green spaces, retesting will occur on green spaces to see if high levels of lead or cadmium are present above ordinance level. If high levels are found then contaminated dirt will be removed to the EPA repository to a depth determined by testing at that time and clean fill testing less than 100 ppm for lead and 40 ppm for cadmium will be brought back in for fill.**

OWNER'S SIGNATURE: Leslie Neuhaus

CITY OF JOPLIN

PHASE ONE GRADING PLAN

JOPLIN PUBLIC LIBRARY

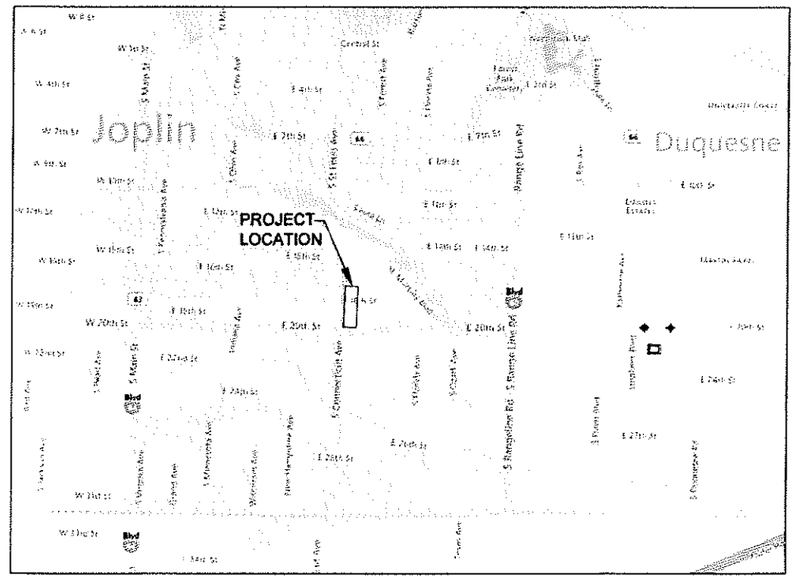
LOCATED AT

20TH STREET & CONNECTICUT AVE.
JOPLIN, JASPER CO., MISSOURI

EDA PROJECT NO. 05-79-05345

DRAWING INDEX

DESCRIPTION	DRAWING NO.
TITLE SHEET	1
INFORMATION SHEET	2
PHASE 1 - DEMOLITION PLAN	3
PHASE 1 - GRADING PLAN	4
PHASE 1 - STORMWATER POLLUTION PREVENTION PLAN (SWPPP)	5
CONSTRUCTION DETAILS	6



PROJECT LOCATION MAP
N.T.S.

TRI-STATE ENGINEERING

Professional Engineers & Land Surveyors
702 South Main - Joplin, Missouri 64801
403 W. First St., Ste. 300 - Claremore, OK 74017
Mailing Address
P.O. Box 1867 - Joplin, Missouri 64802
Phone (417) 781-0643 - FAX (417) 781-4714
TOLL FREE 1-866-781-0643
www.tristate-engineering.com
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DATE 06/12/2015

MISSOURI ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 000530 EXPIRATION DATE DEC. 31, 2016

A. = AMP
(A) = ADJUST
A.A.S.H.T.O. = AMERICAN ASSOC. OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
A.B. = ANCHOR BOLT
ABT. = ABOUT
ABUT. = ABUTMENT
AC = ALTERNATING CURRENT
A/C = AIR CONDITIONER
AC. = ACRE(S)
A.C.S.M. = AMERICAN CONGRESS ON SURVEYING & MAPPING
A.D. = ANNO DOMINI
ADD. = ADDITION
ADDL. = ADDITIONAL
A.F.F. = ABOVE FINISH FLOOR
AGGR. = AGGREGATE
AHD. = AHEAD
A.K.A. = ALSO KNOWN AS
A.L.T.A. = AMERICAN LAND TITLE ASSOCIATION
ALUM. = ALUMINUM
A.M. = ANTE MERIDIEM
ANCH. = ANCHOR
APPROX. = APPROXIMATE
ARCH. = ARCHITECT OR ARCHITECTURAL
ASSOC. = ASSOCIATION
ASPH. = ASPHALT OR ASPHALTIC
A.S.T.M. = AMERICAN SOCIETY OF TESTING & MATERIALS
ATTN. = ATTENTION
AVE. = AVENUE
BC. = BACK OF CURB
BLDG. = BUILDING
BLVD. = BOULEVARD
BK. = BACK OF BOOK
BOTT., BTM. OR BOT. = BOTTOM
BM. OR B.M. = BENCHMARK
BR. = BRIDGE
BRG. = BEARING
BUS. = BUSINESS
C. = CELSIUS
C.F.S. = CUBIC FEET PER SECOND
C. & G. = CURB AND GUTTER
CHD. = CHORD
CHKD. = CHECKED
C.I.P. = CAST IRON PIPE
CIR. = CIRCLE
CL. = CENTERLINE
CLR. = CLEAR OR CLEARANCE
C.M.P. = CORRUGATED METAL PIPE
CO. = COMPANY
C/O = CARE OF
COL. = COLUMN
CONC. = CONCRETE
CONST. OR CONSTR. = CONSTRUCT OR CONSTRUCTION
COR. = CORNER
CORP. = CORPORATE OR CORPORATION
CR. = CROWN
CRT. OR CT. = COURT
CTR. = CENTER
CTY. OR CO. = COUNTY
CU. = CUBIC
CULV. = CULVERT
CU. YDS. OR C.Y. = CUBIC YARDS
D = DEGREE OF CURVE
DEG. = DEGREE
DET. = DETENTION
DEV. = DEVELOPMENT
DIA. = DIAMETER
D.I.P. = DUCTILE IRON PIPE
DIST. = DISTANCE OR DISTRICT
DMH. = STORM DRAIN MANHOLE
DPTH. OR D. OR DP. = DEPTH OR DEEP
DR. = DRIVE OR DOOR
DRN. = DRAIN
DRNGE. = DRAINAGE
DTL. = DETAIL
DWG. = DRAWING
EA. = EACH
EG = EXISTING GRADE ELEVATION
ELEV. OR EL. = ELEVATION
ENG. = ENGINEER
ENTR. = ENTRANCE
EOA = EDGE OF ASPHALT
EOC = EDGE OF CONCRETE
EOG = EDGE OF GRAVEL
EOP = EDGE OF PAVEMENT
EOS = EDGE OF SHOULDER
EOW = EDGE OF WATER
ESMT. = EASEMENT
ETC. = ETCETERA
EXCAV. = EXCAVATE OR EXCAVATION
EXIST. OR EX. = EXISTING
EXP. = EXPANSION OR EXPIRATION
E.W. = EACH WAY
F = FAHRENHEIT
F.B. = FLAT-BOTTOM
FC. = FACE OF CURB OR WALL
FDN. = FOUNDATION
F.E.S. = FLARED END SECTION
FG = FINISH GRADE ELEVATION
FIG. = FIGURE
FIN. FLR. OR F.F. = FINISHED FLOOR ELEVATION
FL. = FLOWLINE (OR INVERT) ELEVATION
FR. = FROM OR FRAME
FT. = FOOT OR FEET
FTG. = FOOTING
FUT. = FUTURE
GA. = GAUGE
GAL. = GALLON
GALV. = GALVANIZED
GAR. = GARAGE
GEN. = GENERATOR OR GENERAL
G.P.M. = GALLONS PER MINUTE
GRD. = GRADE
GRND. = GROUND
GT = GUTTER FLOWLINE ELEVATION
GUT. = GUTTER
HDWL. = HEADWALL
H.D.P.E. = HIGH-DENSITY POLYETHYLENE (CORRUGATE PLASTIC PIPE)
HORIZ. = HORIZONTAL
HP = HORSE POWER
H.P.C. = HORIZONTAL POINT OF CURVE
H.P.T. = HORIZONTAL POINT OF TANGENCY
HR. = HOUR(S)
HT. OR H. = HEIGHT
HWY. = HIGHWAY
HYD. = HYDRANT
INC. = INCORPORATED
INCL. = INCLUDE, INCLUDED OR INCLUDING
INIT. = INITIALS
INT. = INTERSECTION
INV. = INVERT (OR FLOWLINE)
JCT. = JUNCTION
JR. = JUNIOR
JT. = JOINT
L = ARC LENGTH
LB. OF LBS. = POUND(S)
LFL. = LOWER FLOWLINE
LG. = LONG
LGTH. = LENGTH
LIN. FT. OR L.F. = LINEAL FOOT OR FEET
L.L.C. = LIMITED LIABILITY CORPORATION
LN. = LANE
LT. = LEFT
(M) = MOVE
MAT'L = MATERIAL
MAX. = MAXIMUM
MH. = MANHOLE
MIN. = MINUTE(S) OR MINIMUM
M.O. = MASONRY OPENING
MON. = MONITORING OR MONTH
M.P.H. OR MPH = MILES PER HOUR
MTG. = MOUNTING OR MEETING
MTL. = METAL
M.U.T.C.D. = MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N.A.V.D. = NORTH AMERICAN VERTICAL DATUM
N/F = NOW OR FORMERLY (PROPERTY OWNER)
N.G.S. = NATIONAL GEODETIC SURVEY
NO. = NUMBER
NOM. = NOMINAL
NORM. = NORMAL
N.T.S. = NOT TO SCALE
O.C. = ON CENTER
OPNG. = OPENING
ORD. = ORDINANCE
P.C. OR PC. = POINT OF CURVE (BEGINNING POINT OF CURVE)
P.C.C. = PORTLAND CEMENT CONCRETE OR POINT OF COMPOUND CURVE
P.E. = PROFESSIONAL ENGINEER
PERM. = PERMANENT
PG. = PAGE
PH. = PHASE OR PHONE
P.I. OR PI. = POINT OF INTERSECTION (INTERSECTION OF TANGENTS)
PL. = PROPERTY LINE OR PLACE
PLCS. = PLACES
P.L.S. = PROFESSIONAL LAND SURVEYOR
P.M. = POST MERIDIEM
P.O. = POST OFFICE
P.O.B. = POINT OF BEGINNING
P.O.C. = POINT OF COMMENCING OR POINT ON CURVE
P.O.L. = POINT ON LINE
P.R.C. = POINT OF REVERSE CURVE
PRELIM. = PRELIMINARY
PRKG. = PARKING
PROF. = PROFILE
PROJ. = PROJECT
PROP. OR PR. = PROPOSED
P.S.I. = POUNDS PER SQUARE INCH
P.T. OR PT. = POINT OF TANGENCY (END OF CURVE)
PUB. = PUBLIC
PV = PAVEMENT SURFACE ELEVATION
P.V.C. OR PVC = POLYVINYL CHLORIDE (PIPE OR ELECTRICAL CONDUIT)
P.V.C. OR PVC. = POINT OF VERTICAL CURVE (BEGIN VERTICAL CURVE)
P.V.I. = POINT OF VERTICAL INTERSECTION
PVMT. = PAVEMENT
P.V.T. OR PVT. = POINT OF VERTICAL TANGENCY
PWR. = POWER
QTY. OR QTY'S. = QUANTITY(IES)
(R) = REMOVE
RAD. OR R. = RADIUS
R.C.B. OR RCB = REINFORCED CONCRETE BOX
R.C.P. OR RCP = REINFORCED CONCRETE PIPE
R.D. = ROOF DRAIN
RD. = ROAD
RDWY. = ROADWAY
RECT. = RECTANGULAR
REG. = REGISTRATION, REGULATOR OR REGULAR
REINF. = REINFORCE, REINFORCED OR REINFORCING
RET. = RETAIN, RETAINING OR RETENTION
REV. = REVISED OR REVISION
REQ'D = REQUIRED
R.L.S. = REGISTERED LAND SURVEYOR
RNG. OR R = RANGE
R.O. = ROUGH OPENING
R.O.W. OR R/W = RIGHT-OF-WAY
R.R. = RAILROAD
RT. = RIGHT
RTE. = ROUTE
SAN. = SANITARY
SCH. = SCHOOL
SCHED. = SCHEDULE
SEC. = SECTION
SETBK. = SETBACK
SDWK. OR SWK. = SIDEWALK
SHT. = SHEET
SIM. = SIMILAR
SMH. = SANITARY SEWER MANHOLE
SPA. = SPACE(ED)(S) OR SPACING
SPEC. = SPECIFICATION(S)
SR. = SENIOR
S.S. = STAINLESS STEEL
STE. = SUITE
STRUC. = STRUCTURE OR STRUCTURAL
SUBDIV. = SUBDIVISION
SUBTTL. = SUBTOTAL
SW = SIDEWALK ELEVATION
SQ. = SQUARE
SQ. FT. OR S.F. = SQUARE FEET
S.Y. = SQUARE YARDS
ST. = STREET
STA. = STATION
STD. OR STDS. = STANDARD(S)
STL. = STEEL
SWR. = SEWER
SYM. = SYMMETRICAL
T = TOWNSHIP
T.B.M. = TEMPORARY BENCHMARK
TC. = TOP OF CURB
TEL. = TELEPHONE
TEMP. = TEMPORARY OR TEMPERATURE
TFWY. OR TWY. = TRAFFICWAY
THK. = THICK
TNAIL = TRAVERSE NAIL (CONTROL POINT)
T.O. = TOP OF
TPK. = TURNPIKE
TRANS. = TRANSITION OR TRANSFORMER
TRM = TURF REINFORCEMENT MAT
TTL. = TOTAL
TW = TOP OF WALL ELEVATION
TWP. = TOWNSHIP
TYP. = TYPICAL
UFL = UPPER FLOWLINE
(UIP) = USE IN PLACE (TO REMAIN UNDISTURBED)
U.S. = UNITED STATES
U.S.G.S. = UNITED STATES GEOLOGIC SURVEY
UTIL. = UTILITY
V. = VOLT
VAR. = VARIES OR VARIABLE
V.C. = VERTICAL CURVE
V.C.P. = VITRIFIED CLAY PIPE
VERT. = VERTICAL
W. = WIDTH OR WATT
WIN. = WINDOW
WT. = WEIGHT
WTR. = WATER
W.W. = WING WALL
W.W.F. = WELDED WIRE FABRIC
W.W.M. = WELDED WIRE MESH
X-ING = CROSSING
X-SEC = CROSS SECTION
YD. OR YDS. = YARD(S)
YR. = YEAR

DIRECTIONS:
E = EAST
N. = NORTH
S. = SOUTH
W. = WEST
NE. = NORTHEAST
NW = NORTHWEST
SE = SOUTHEAST
SW = SOUTHWEST
ENE = EAST-NORTHEAST
ESE. = EAST-SOUTHEAST
NNE = NORTH-NORTHEAST
NNW. = NORTH-NORTHWEST
SSE. = SOUTH-SOUTHEAST
SSW. = SOUTH-SOUTHWEST
WNW. = WEST-NORTHWEST
WSW. = WEST-SOUTHWEST

MONTHS:
JAN. = JANUARY
FEB. = FEBRUARY
MAR. = MARCH
APR. = APRIL
MAY = MAY
JUN. = JUNE
JUL. = JULY
AUG. = AUGUST
SEP. = SEPTEMBER
OCT. = OCTOBER
NOV. = NOVEMBER
DEC. = DECEMBER

STATES:
AL = ALABAMA
AK = ALASKA
AR = ARKANSAS
AZ = ARIZONA
CA = CALIFORNIA
CO = COLORADO
CT = CONNECTICUT
DE = DELAWARE
DC = DISTRICT OF COLUMBIA
FL = FLORIDA
GA = GEORGIA
HI = HAWAII
ID = IDAHO
IL = ILLINOIS
IN = INDIANA
IA = IOWA
KS = KANSAS
KY = KENTUCKY
LA = LOUISIANA
ME = MAINE
MD = MARYLAND
MA = MASSACHUSETTS
MI = MICHIGAN
MN = MINNESOTA
MS = MISSISSIPPI
MO = MISSOURI
MT = MONTANA
NE = NEBRASKA
NV = NEVADA
NH = NEW HAMPSHIRE
NJ = NEW JERSEY
NM = NEW MEXICO
NY = NEW YORK
NC = NORTH CAROLINA
ND = NORTH DAKOTA
OH = OHIO
OK = OKLAHOMA
OR = OREGON
PA = PENNSYLVANIA
RI = RHODE ISLAND
SC = SOUTH CAROLINA
SD = SOUTH DAKOTA
TN = TENNESSEE
TX = TEXAS
UT = UTAH
VT = VERMONT
VA = VIRGINIA
WA = WASHINGTON
WV = WEST VIRGINIA
WI = WISCONSIN
WY = WYOMING

NOTES
THESE ABBREVIATIONS ARE PROVIDED AS A GENERAL REFERENCE AND MAY NOT BE CONSIDERED AN EXHAUSTIVE LIST AND IT IS PROBABLE THAT ONLY A PORTION OF THEM HAVE BEEN USED ON THE PLANS FOR THIS PROJECT

(.) PERIODS IN ABBREVIATIONS ARE OPTIONAL, BUT PREFERRED PLACEMENT IS SHOWN

BEFORE NUMBER = NUMBER (AS IN #4 REBAR)
AFTER NUMBER = POUND(S) (AS IN 20# ROOFING FELT)

MODNR OR MDNR = MISSOURI DEPARTMENT OF NATURAL RESOURCES
MODOT = MISSOURI DEPARTMENT OF TRANSPORTATION

LEGEND

- BENCHMARK OR T.B.M
- AERIAL TARGET
- ALUMINUM MONUMENT FOUND
- ALUMINUM MONUMENT SET
- AXLE FOUND
- BOLT FOUND
- BORE HOLE
- CONTROL POINT OR TRAVERSE NAIL
- COPPER WELD FOUND
- COTTON SPINDLE FOUND
- COTTON SPINDLE SET
- CROSS FOUND
- CROSS SET
- CROWS FOOT FOUND
- DRILL STEEL FOUND
- EASEMENT MARKER SET
- IRON BAR FOUND
- IRON PIN FOUND
- IRON PIN SET
- IRON PIPE FOUND
- 60D NAIL FOUND
- 60D NAIL SET
- P.K. NAIL FOUND
- P.K. NAIL SET
- RAILROAD SPIKE FOUND
- RIGHT-OF-WAY MARKER FOUND
- SLASH FOUND
- STONE FOUND
- T-RAIL FOUND
- AIR CONDITIONER UNIT
- AIR RELEASE VALVE
- BIRD HOUSE OR MARTIN HOUSE
- CABLE TV PULLBOX
- BURIED CABLE TV CABLE(S)
- DUMPSTER
- ELECTRICAL PULLBOX
- ELECTRIC METER
- ELECTRIC VAULT
- FLOOD LIGHT
- LIGHT POLE
- PARKING LOT LIGHTS
- GUY WIRE ANCHOR
- GUY POLE
- POWER POLE
- POWER POLE W/ TRANSFORMER
- SERVICE POLE
- PAD MOUNTED TRANSFORMER
- OVERHEAD ELECTRIC LINE(S)
- BURIED OR UNDERGROUND ELECTRIC CABLE(S)
- FLAG POLE
- FENCE POST OR GUARD POST
- BARB OR WOVEN WIRE FENCE
- CHAINLINK FENCE
- STOCKADE OR WOODEN FENCE
- GUARDRAIL
- FUEL CAP
- GAS METER
- GAS PUMP
- GAS REGULATOR
- GAS TEST STATION
- GAS VALVE
- GAS VAULT
- GAS VENT PIPE
- NATURAL GAS LINE
- HIGH PRESSURE GAS LINE
- GRAVE MARKER
- HANDICAP SYMBOL
- MAIL BOX
- RAILROAD CONTROL BOX
- RAILROAD CROSSBUCK SIGN
- RAILROAD CROSSBUCK W/ LIGHTS
- RAILROAD CROSSBUCK W/ LIGHTS & GATE
- RAILROAD CROSSING PLANK
- RAILROAD CROSSING SIGN
- RAILROAD DERAIL
- RAILROAD MILE POST
- RAILROAD POINT OF SWITCH
- RAILROAD SIGN
- RAILROAD SIGNAL CANTILEVER
- RAILROAD SIGNAL DWARF
- RAILROAD SIGNAL STANDARD
- RAILROAD SIGNAL STANDARD W/ ARM
- RAILROAD SWITCH
- RAILROAD WHISTLE BOARD
- RAILROAD TRACK (SINGLE LINE AS SET OF RAILS)
- RAILROAD TRACK (DUAL LINE AS SET OF RAILS)
- STONE WALL
- SANITARY SEWER CLEANOUT
- SANITARY SEWER GREASE TRAP
- SANITARY SEWER LAMPHOLE
- SANITARY SEWER MANHOLE
- SANITARY SEWER SEPTIC TANK
- SANITARY SEWER (GRAVITY)
- PRESSURE SEWER OR FORCE MAIN
- PRESSURE RELIEF VALVE
- SATELLITE DISH
- SMALL SIGN OR TRAFFIC SIGN
- LARGE SIGN OR BILLBOARD
- TWO-POST SIGN
- STREET SIGN
- STORM DRAIN DROP INLET
- STORM DRAIN MANHOLE OR JUNCTION BOX
- STORM DRAIN (SMALL DIA. OR AS SINGLE LINE)
- TELEPHONE PULLBOX
- TELEPHONE PEDESTAL OR RISER
- TELEPHONE VAULT
- BURIED OR UNDERGROUND TELEPHONE CABLE(S)
- OVERHEAD TELEPHONE LINE(S)
- FIBER-OPTIC MARKER
- FIBER-OPTIC CABLE(S)
- TEST PIT
- TRAFFIC CONTROL CABINET
- TRAFFIC DELINEATOR
- TRAFFIC SIGNAL MAST ARM
- TRAFFIC SIGNAL SPAN WIRE
- TRAFFIC VAULT OR PULLBOX
- UNKNOWN UTILITY BOX OR PULLBOX
- UNKNOWN UTILITY METER
- UTILITY POLE (UNKNOWN OR MULTIPLE)
- UNKNOWN UTILITY VAULT
- FIRE HYDRANT
- WATER METER
- MONITORING WELL
- QUICK COUPLING VALVE
- SPRINKLER HEAD
- WATER VALVE
- WATER WELL
- YARD HYDRANT
- WATER LINE
- DECIDUOUS TREE
- EVERGREEN TREE
- ORNAMENTAL BUSH
- ORNAMENTAL TREE
- PINE TREE
- SHRUB OR BUSH
- TREE STUMP
- WILLOW TREE
- TREE OR BRUSH LINE

GENERAL NOTES

1. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS AND FIELD CONDITIONS WHEN POSSIBLE. BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING IF THE CLEARANCES ARE LESS THAN SPECIFIED ON THE PLANS OR 18", WHICHEVER IS LESS. CONTACT TRI-STATE ENGINEERING 417-781-0643 PRIOR TO PROCEEDING WITH CONSTRUCTION

2. THE CONTRACTOR SHALL INCLUDE IN HIS CONTRACT PRICE THE REMOVAL AND DISPOSAL OF ANY EXCESS TOPSOIL WHICH HE DETERMINES IS NOT REQUIRED TO PERFORM THE FINAL GRADING AND LANDSCAPING OPERATIONS.

3. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL REQUIRED/NECESSARY SHEETING, SHORING, BRACING, AND SPECIAL EXCAVATION MEASURES REQUIRED ON THE PROJECT TO MEET OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE WORK INDICATED ON THE DRAWINGS. THE OWNER AND GRAY ROCK CONSULTING, INC. ACCEPT NO RESPONSIBILITY FOR THE DESIGN TO INSTALL SAID ITEMS.

4. CALL BEFORE YOU DIG AT 1-800-344-7483.

5. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE DAILY RECORD KEEPING OF THE AS-BUILT CONDITION OF ALL OF THE UNDERGROUND UTILITIES AND CONSTRUCTION STAKING ASSOCIATED WITH THE PROJECT

6. THE LAND DISTURBANCE PERMIT MUST BE KEPT ON THE WORK SITE AND SHOWN UPON REQUEST.

7. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ANY DE-WATERING IF NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS

8. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE, ANY AND ALL COST ASSOCIATED WITH PROVIDING A PROFESSIONAL ENGINEER ON SITE IF THE CONTRACTOR DOES NOT ADEQUATELY HANDLE STORMWATER MANAGEMENT FACILITIES AND A PROFESSIONAL ENGINEER IS REQUIRED BY A GOVERNING AGENCY DURING THE CONSTRUCTION OF SAID FACILITIES

9. SEDIMENT CONTROL MEASURES MUST BE INSPECTED AND MAINTAINED REGULARLY TO INSURE THAT THE INTENDED PURPOSES ARE ACCOMPLISHED

10. ALL SITE WORK AND CONSTRUCTION FOR THIS PROJECT SHALL BE IN CONFORMANCE WITH THE CITY OF JOPLIN REGULATIONS.

11. THE CONTRACTOR SHALL SPOIL ANY EXCESS TOPSOIL LOCATED ON THE SITE THAT IS NOT REQUIRED TO PERFORM LANDSCAPE OPERATIONS. IF SUFFICIENT TOPSOIL IS NOT PRESENT ON SITE, THE CONTRACTOR SHALL IMPORT TOPSOIL TO THE SITE IN ORDER TO COMPLETE THE LANDSCAPE OPERATIONS. THE CONTRACTOR SHALL PERFORM A SOIL TEST ON THE EXISTING AND IMPORTED TOPSOIL AND APPLY LIME AND FERTILIZER AS RECOMMENDED BY THE TESTING AGENCY.

12. CONTRACTOR TO FIELD VERIFY DEPTHS AND SIZES OF EXISTING UTILITIES TO BE CROSSED PRIOR TO LAYING NEW LINES. CONTRACTOR SHALL NOT SUBMIT CLAIM FOR EXTRA WORK PERFORMED FOR LAYING NEW LINES THAT CONFLICT WITH EXISTING UTILITIES WHICH WERE NOT VERIFIED PRIOR TO BEGINNING NEW WORK. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY POTENTIAL CONFLICTS EXPOSED PRIOR TO LAYING NEW LINES.

13. ALL CURB/HANDICAP RAMP DESIGNS SHALL CONFORM TO ADA STANDARDS.

14. ALL WELLS AND SEPTIC SYSTEMS (IF ANY) MUST BE LOCATED AND ABANDONED BY A STATE-LICENSED AND BONDED DRILLER ACCORDING TO LOCAL, STATE, AND FEDERAL REQUIREMENTS

MISSOURI ONE CALL SYSTEM, INC. 1-800-DIG-RITE STOP. CALL BEFORE YOU DIG

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DATE	8/12/2015
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CHKD. BY	
SHEET NO	2

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CLAYTON C. OBERY, JR. E-28604
STATE OF MISSOURI PROFESSIONAL ENGINEER

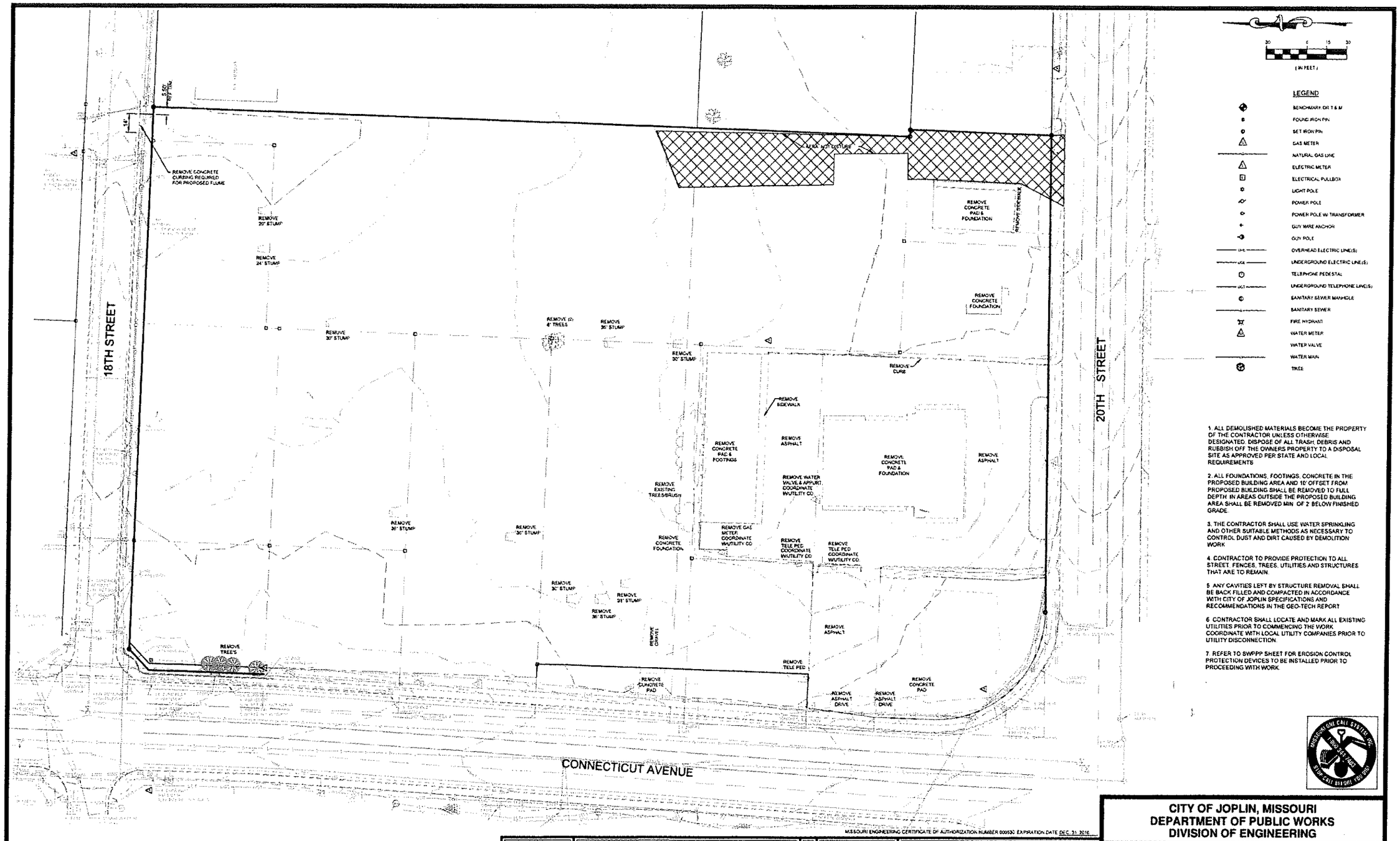
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CITY OF JOPLIN, MISSOURI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

PROJECT
INFORMATION SHEET - PHASE ONE GRADING
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CITY ENGINEER — DATE 8/12/2015

DRAWN BY	CHECKED BY	SCALE	PLAN NO.
EWS TRI-STATE ENGINEERING JOPLIN, MO.		N.T.S	SHEET NO. 2 OF 6



LEGEND

- BENCHMARK OR T & M
- FOUND IRON PIN
- SET IRON PIN
- GAS METER
- NATURAL GAS LINE
- ELECTRIC METER
- ELECTRICAL PULLBOX
- LIGHT POLE
- POWER POLE
- POWER POLE W/ TRANSFORMER
- GUY WIRE ANCHOR
- GUY POLE
- OHE — OVERHEAD ELECTRIC LINE(S)
- UGE — UNDERGROUND ELECTRIC LINE(S)
- TELEPHONE PEDESTAL
- UGT — UNDERGROUND TELEPHONE LINE(S)
- SANITARY SEWER MANHOLE
- SANITARY SEWER
- FIRE HYDRANT
- WATER METER
- WATER VALVE
- WATER MAIN
- TREE

1. ALL DEMOLISHED MATERIALS BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED. DISPOSE OF ALL TRASH, DEBRIS AND RUBBISH OFF THE OWNERS PROPERTY TO A DISPOSAL SITE AS APPROVED PER STATE AND LOCAL REQUIREMENTS.

2. ALL FOUNDATIONS, FOOTINGS, CONCRETE IN THE PROPOSED BUILDING AREA AND 10' OFFSET FROM PROPOSED BUILDING SHALL BE REMOVED TO FULL DEPTH. IN AREAS OUTSIDE THE PROPOSED BUILDING AREA SHALL BE REMOVED MIN. OF 2' BELOW FINISHED GRADE.

3. THE CONTRACTOR SHALL USE WATER SPRINKLING AND OTHER SUITABLE METHODS AS NECESSARY TO CONTROL DUST AND DIRT CAUSED BY DEMOLITION WORK.

4. CONTRACTOR TO PROVIDE PROTECTION TO ALL STREET, FENCES, TREES, UTILITIES AND STRUCTURES THAT ARE TO REMAIN.

5. ANY CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE BACK FILLED AND COMPACTED IN ACCORDANCE WITH CITY OF JOPLIN SPECIFICATIONS AND RECOMMENDATIONS IN THE GEO-TECH REPORT.

6. CONTRACTOR SHALL LOCATE AND MARK ALL EXISTING UTILITIES PRIOR TO COMMENCING THE WORK. COORDINATE WITH LOCAL UTILITY COMPANIES PRIOR TO UTILITY DISCONNECTION.

7. REFER TO SWPPP SHEET FOR EROSION CONTROL PROTECTION DEVICES TO BE INSTALLED PRIOR TO PROCEEDING WITH WORK.

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SHEET NO	3

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CERTIFICATE OF AUTHORITY EXPIRES DATE 12/31/2015

STATE OF MISSOURI PROFESSIONAL ENGINEER

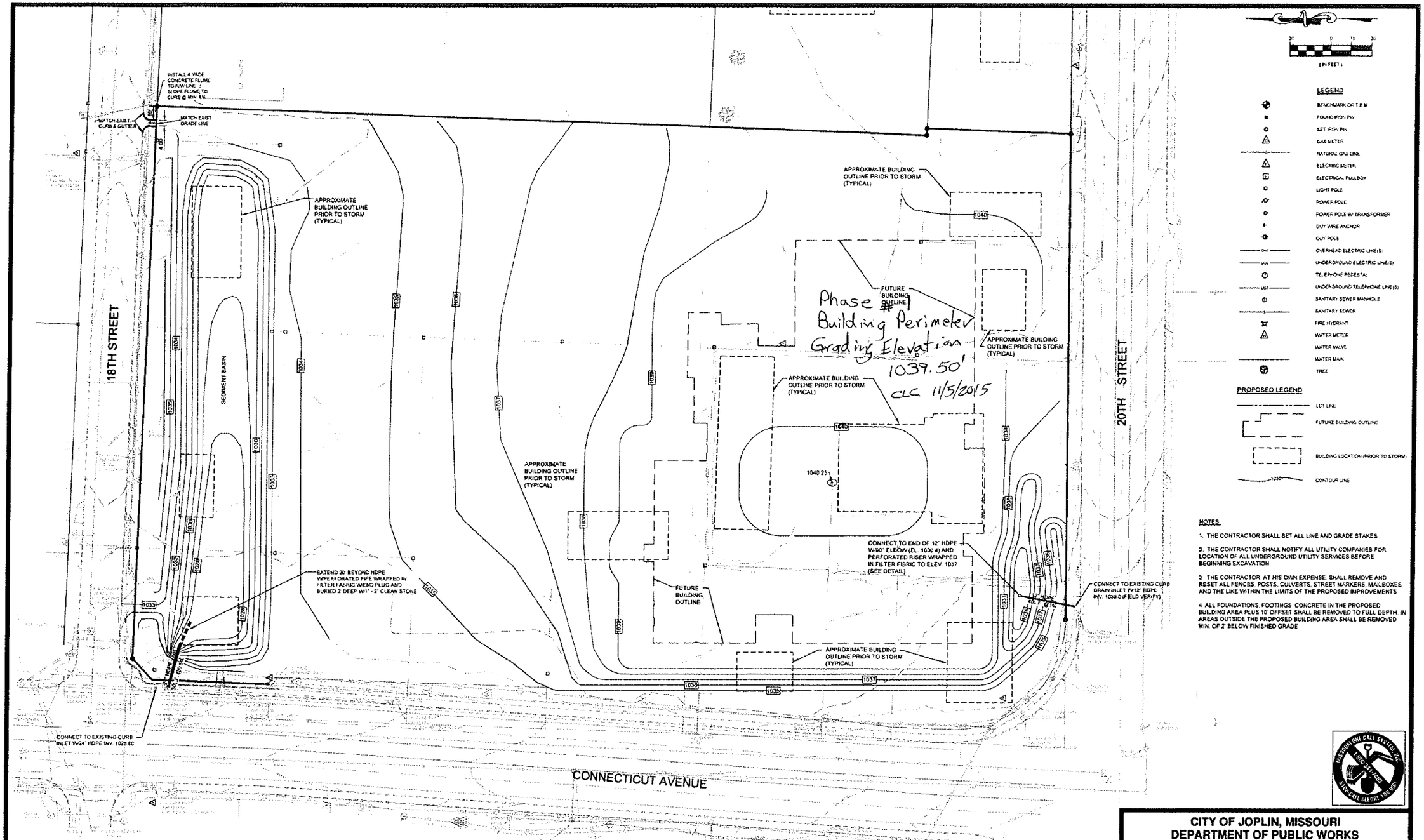
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NOTES

1. THE CONTRACTOR SHALL SET ALL LINE AND GRADE STAKES.
2. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES FOR LOCATION OF ALL UNDERGROUND UTILITY SERVICES BEFORE BEGINNING EXCAVATION.
3. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL REMOVE AND RESET ALL FENCES, POSTS, CULVERTS, STREET MARKERS, MAILBOXES AND THE LIKE WITHIN THE LIMITS OF THE PROPOSED IMPROVEMENTS.
4. ALL FOUNDATIONS, FOOTINGS, CONCRETE IN THE PROPOSED BUILDING AREA PLUS 10' OFFSET SHALL BE REMOVED TO FULL DEPTH. IN AREAS OUTSIDE THE PROPOSED BUILDING AREA SHALL BE REMOVED MIN. OF 2' BELOW FINISHED GRADE

MISSOURI ONE CALL SYSTEM, INC. 800-DIG-RITE (800-344-7483) STOP CALL BEFORE YOU DIG

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CLAYTON CHESLY CIVIL ENGR. E-29884

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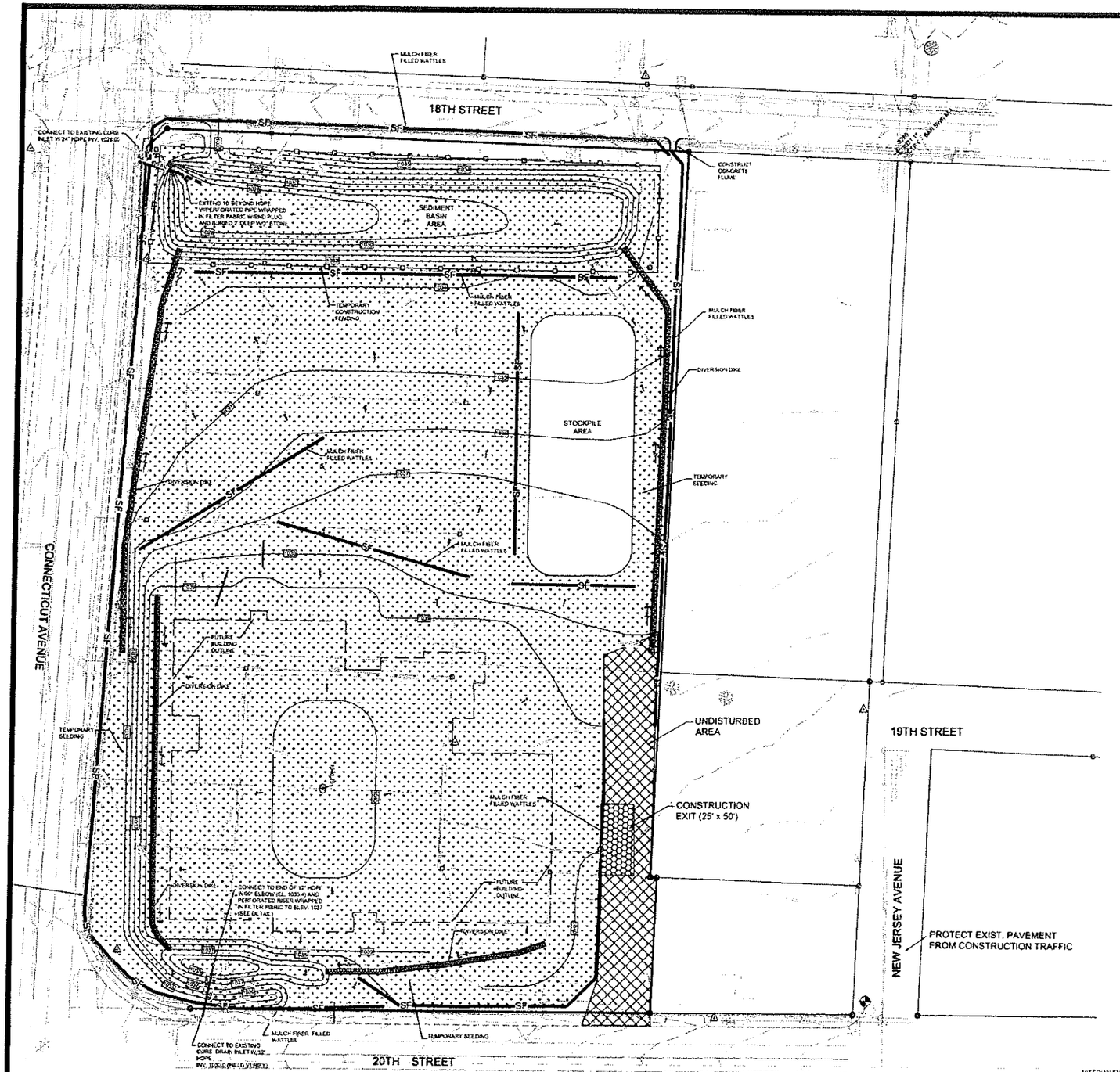
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PROJECT
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CITY ENGINEER — DATE 6/12/15

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EWS TRI-STATE ENGINEERING JOPLIN, MO		1" = 30'	SHEET NO. 4 OF 6



EXISTING LEGEND

- BENCHMARK OR T.B.M
- FOUND IRON PIN
- SET IRON PIN
- GAS METER
- GAS VALVE
- NATURAL GAS LINE
- ELECTRIC METER
- ELECTRICAL PULLBOX
- LIGHT POLE
- POWER POLE
- POWER POLE W/ TRANSFORMER
- GUY WIRE ANCHOR
- GUY POLE
- OVERHEAD ELECTRIC LINE(S)
- UNDERGROUND ELECTRIC LINE(S)
- TELEPHONE PEDESTAL
- UNDERGROUND TELEPHONE LINE(S)
- SANITARY SEWER MANHOLE
- SANITARY SEWER
- FIRE HYDRANT
- WATER METER
- WATER VALVE
- WATER MAIN
- FENCE OR GUARD POST
- SMALL SIGN OR TRAFFIC SIGN
- LARGE SIGN OR BILLBOARD
- STREET SIGN
- TREE
- EXISTING TREE LINE
- DEMO TREE LINE

(IN FEET)
1 INCH = 40 FT

SEQUENCE OF CONSTRUCTION:

EXPECTED DATE ON WHICH CLEARING WILL BEGIN
3RD QUARTER OF 2015

ESTIMATED DURATION OF EXPOSURE OF CLEARED AREAS
2 QUARTERS OF 2015.

PERMANENT EROSION CONTROL MEASURES:

BROADCAST OR DRILLED SODDED
SEED MIXTURES & RATE (MINIMUM REQUIREMENTS)

TEMPORARY SEED MIXTURE, URBAN TEMPORARY EROSION CONTROL MIXTURE, SHORT LIVED (6-8 MONTHS)

OATS.....65 LB/PER ACRE
ANNUAL RYEGRASS....40 LB/PERACRE

THE SEED SHALL BE FREE FROM JOHNSON GRASS, CANADIAN THISTLE, OR FIELD BIND WEED SEED, AND SHALL NOT CONTAIN MORE THAN TWO PERCENT (2%) OF OTHER WEED SEEDS.

SEEDBED &/OR SOIL PREPARATION PER SPECIFICATIONS SECTION 5100

OWNER/DEVELOPER:

CITY OF JOPLIN
602 S. MAIN STREET
JOPLIN, MO. 64802

CONSULTANT:

ATTN: CLAYTON L. CRISTY, P.E.
TRI-STATE ENGINEERING, INC.
702 MAIN ST. - P.O. BOX 1867
JOPLIN, MO 64802
417-781-0643

EROSION & SEDIMENT CONTROL NOTES:

1. ALL LAND CLEARING, CONSTRUCTION, OR DEVELOPMENT INVOLVING THE MOVEMENT OF EARTH SHALL BE IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLAN AND STORM WATER POLLUTION PREVENTION PLAN.
2. ALL SILT FENCES, CONSTRUCTION ENTRANCES, DITCH CHECKS AND ANY OTHER EROSION & SEDIMENT CONTROL DEVICES NECESSARY SHALL BE IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITIES INCLUDING CLEARING & GRUBBING AND SHALL BE MAINTAINED & REPAIRED UNTIL THE FINAL CERTIFICATE OF OCCUPANCY IS ISSUED.
3. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED FOR EACH NON-CONTIGUOUS DEVELOPMENT SITE.
4. STANDARD TECHNIQUES SHALL BE EMPLOYED TO PREVENT THE BLOWING OF DUST OR SEDIMENT FROM THE SITE.
5. THE CONTRACTOR IS TO ENSURE THAT SEDIMENT IS NOT TRACKED ONTO PUBLIC STREETS BY CONSTRUCTION VEHICLES OR WASHED INTO STORM DRAINS. PUBLIC STREETS SHALL BE SCRAPED &/OR SWEPT DAILY BY THE CONTRACTOR TO THE INSPECTOR'S SATISFACTION.
6. ALL CUT & FILL SLOPES SHALL BE 3:1 OR FLATTER EXCEPT AS APPROVED OTHERWISE.
7. UPLAND RUNOFF SHALL BE DIVERTED AROUND DISTURBED AREAS WHERE POSSIBLE.
8. SOIL STOCKPILES SHALL REMAIN A MINIMUM OF 5 FEET FROM THE STREET RIGHT-OF-WAY, SHALL NOT EXTEND BEYOND PROPERTY LINES, AND SHALL BE STABILIZED OR COVERED AT THE END OF EACH WORK DAY.
9. ALL EROSION & SEDIMENT CONTROL DEVICES SHALL BE CHECKED AND NECESSARY REPAIRS MADE &/OR SEDIMENT & DEBRIS CLEARED AFTER ALL STORM WATER EVENTS.
10. UNLESS OTHERWISE NOTED, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION IS COMPLETE.

ACREAGE SUMMARY

IN ACRES	
UNDISTURBED AREA	0.25
SEEDED AREA	5.5
TOTAL DISTURBED	5.8

PROPOSED LEGEND

- UNDISTURBED AREA
- CONSTRUCTION ENTRANCE
- SF — MULCH WATTLE
- TEMPORARY FENCING
- DIVERSION DIKE

DIVERSION ONE CALL SYSTEM, INC. 800-344-7483 STOP! CALL BEFORE YOU DIG

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CLAYTON L. CRISTY — DATE SIGNED 6/12/15

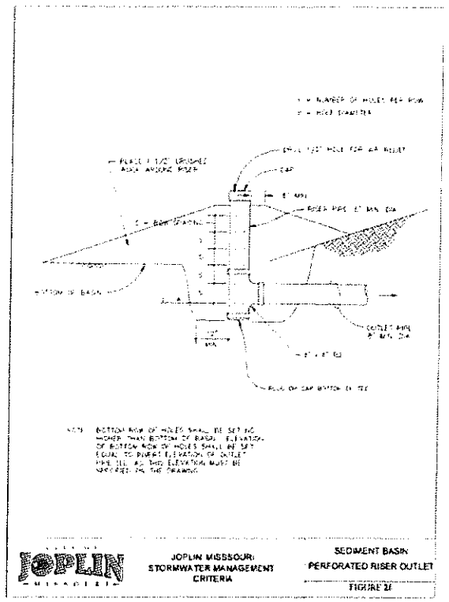
NO	DATE	INIT	REVISIONS

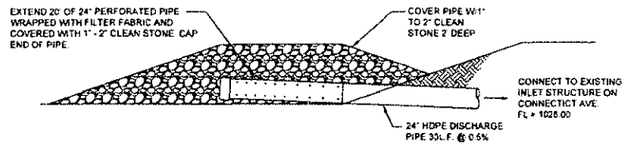
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PROJECT
PHASE 1 STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
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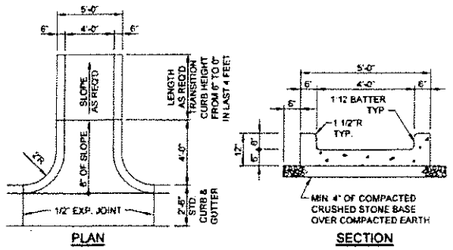
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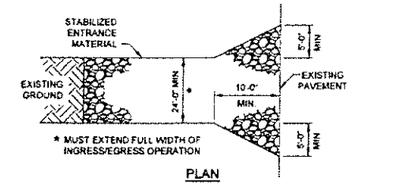




SEDIMENT BASIN W/PERFORATED OUTLET PIPE
N.T.S.



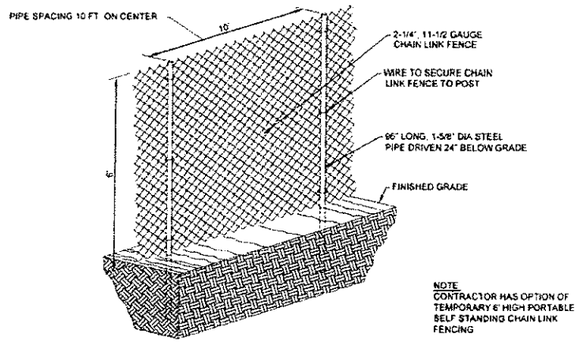
CURB FLUME FOR STD. CURB
N.T.S.



NOTES
STABILIZED ENTRANCE MATERIAL SHALL BE 2"-3" DIA. COARSE AGGREGATE

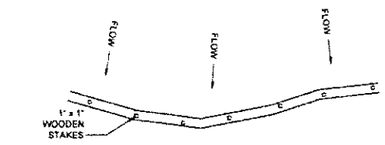
MAINTENANCE
1. INSPECT ON A DAILY BASIS OR AS NECESSARY.
2. IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED ONTO PUBLIC ROADWAY.
3. ADD ADDITIONAL STABILIZED MATERIAL AS NECESSARY

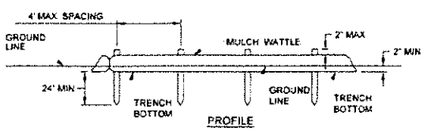
CONSTRUCTION EXIT
N.T.S.



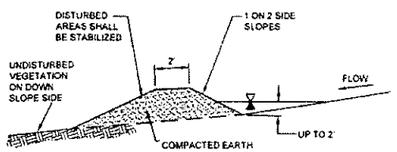
NOTE
CONTRACTOR HAS OPTION OF TEMPORARY 6' HIGH PORTABLE SELF STANDING CHAIN LINK FENCING

TEMPORARY CONSTRUCTION FENCING
N.T.S.





MULCH WATTLE OR INLET PROTECTION DETAIL



DIVERSON DIKE
N.T.S

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CONTROL CHECK

STATE OF MISSOURI — JUSTIN WAYNE MILLER — NUMBER 2006018751 — REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	INIT	REVISIONS

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DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

PROJECT
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Urban Design

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Aspen, CO 81611
970-925-8354
970-920-1387 fax

www.designworkshop.com

ADDENDUM NO. 1

Project:	New Joplin Library
	Site Landscape Construction Documents
	Volume 2 of 2
Cliet:	City of Joplin
EDA PROJECT#:	05-79-05345
Date:	November 5, 2015
Subject:	Landscape Architecture Addendum No. 1

This addendum shall modify the drawings and specifications for volume 2 of 2 requirements as herein noted. This addendum, however, shall not relieve the General Contractor or his sub-contractors of any responsibility under the plans or specifications except as amended herein. Please regularly check the City of Joplin, Tri-State Engineering, and USA Print (417) 626-0966 for additional information.

SPECIFICATIONS:

Section 2656000 Exterior Lighting
The attached section for exterior lighting shall replace the original section.

PLANS CLARIFICATION OR AMENDMENTS:

Sheet L3-04: Change to Type S Curb at Connecticut Entrance, on south sidewalk running east-west, south side of sidewalk from ramp to curbed ramp as labeled as "Curbed Sidewalk" Sheet CS-03

Sheet L3-06: Located egress signage and provided elevation detail of these changes on sheet L7-15.

Sheet L7-01: Modified detail 5 Gravel Paving to simplify gravel riprap requirements.

Sheet L7-06: Deleted extra jointing keynotes Wall Type 2 - Stone Accent Wall details.

Sheet L7-08: Adjusted Keynote leader lines to point at proper joint locations.

Sheet L7-15: Provided elevation detail showing location of egress signage on exterior site wall.

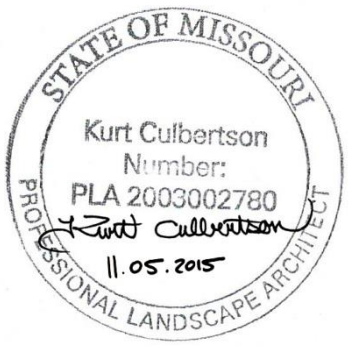
Sheet L7-18: Wall Type 4 Perspective View edited to include all joint lines

Sheet L7-21: Sheet was previously omitted in original submission.

Sheet L 11-01: Deleted excess Keynote 11.8 per Contractor question this signage type is not included in the scope of work.

END OF ADDENDUM NO. 1

Kurt Culbertson PLA.
Design Workshop Inc.
120 East Main Street
Aspen, CO. 81611



SECTION 265600 - EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including 1) **EDA Contracting Provisions for Construction Projects**, 2) **Standard General Instructions to Bidders - City of Joplin,** 3) **Special Instructions to Bidders - City of Joplin,** 4) **General Conditions for Building Projects – City of Joplin** and 5) **Special Provisions - City of Joplin** and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Exterior luminaires with lamps and ballasts.
2. Exterior GFI. Outlets and mounting pedestals.
3. Required Power Supply / Transformers
4. Vehicular Pole Mounted Lighting and luminaries

B. Related Sections:

1. Section 265100 "Interior Lighting" for exterior luminaires normally mounted on exterior surfaces of buildings.
2. Section 101423 "SITE WAYFINDING SIGNAGE" for all signage lighting
3. Section 329800 "SITE APPURTENANCES" for pedestrian lighted bollards

1.3 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color-rendering index.

C. HID: High-intensity discharge.

D. LER: Luminaire efficacy rating.

E. Luminaire: Complete lighting fixture, including ballast housing if provided.

F. Pole: Luminaire support structure, including tower used for large area illumination.

G. Standard: Same definition as "Pole" above.

1.4 ACTION SUBMITTALS

A. Product Data: For each luminaire, and support component, arranged in order of lighting unit designation. Include data on features, accessories, finishes, and the following:

1. Physical description of luminaire, including materials, dimensions, effective projected area, and verification of indicated parameters.
2. Manufacturer provided or any deviations from design drawings details of attaching luminaires and accessories.
3. Manufacturer Details of installation and construction.
4. Luminaire materials.
5. Ballasts, including energy-efficiency data.
6. Lamps, including life, output, CCT, CRI, lumens, and energy-efficiency data.
7. Materials, dimensions, and finishes of poles.
8. Means of attaching luminaires to supports, and indication that attachment is suitable for components involved.
9. Anchor bolts for poles.

B. Shop Drawings: For any proposed changes or deviations from proposed design drawings for approval by Civil Engineer and Landscape Architect. Include plans, elevations, sections, details, and attachments to other work.

1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
2. Anchor-bolt templates keyed to specific poles and certified by manufacturer.
3. Design calculations, certified by a qualified professional engineer, indicating strength of screw foundations and soil conditions on which they are based.
4. Wiring Diagrams: For power, signal, and control wiring.

C. Samples: For products designated for sample submission in the Exterior Lighting Device Schedule. Each Sample shall include lamps and ballasts.
1. Samples (if approved by Civil Engineer and Landscape Architect) may be used in final installation if undamaged, marked, and approved by manufacturer for full warranty application.

1.5 INFORMATIONAL SUBMITTALS

A. Pole and Support Component Certificates: Signed by manufacturers of poles, certifying that products are designed for indicated load requirements in AASHTO LTS-4-M and that load imposed by luminaire and attachments has been included in design. The certification shall be based on design calculations by a professional engineer.

B. Qualification Data: For qualified agencies providing photometric data for lighting fixtures.

C. Field quality-control reports.

D. Warranty: Sample of product or manufacturer specific warranty. For each product included in or associated to the Exterior Lighting Device Schedule.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For luminaires and poles luminaire lowering devices to include in emergency, operation, and maintenance manuals.

1.7 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Lamps: One for every 10 of each type and rating installed. Furnish at least one of each type.
2. Glass and Plastic Lenses, Covers, and Other Optical Parts: One for every 10 of each type and rating installed. Furnish at least one of each type.
3. Ballasts: One for every 20 of each type and rating installed. Furnish at least one of each type.
4. Globes and Guards: One for every 10 of each type and rating installed. Furnish at least one of each type.

1.8 QUALITY ASSURANCE

A. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by manufacturers' laboratories that are accredited under the National Volunteer Laboratory Accreditation Program for Energy Efficient Lighting Products.

B. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by an independent agency, with the experience and capability to conduct the testing indicated, that is an NRTL as defined by OSHA in 29 CFR 1910.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

D. Comply with IEEE C2, "National Electrical Safety Code."

E. Comply with NFPA 70.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Package all components for shipping according to ASTM B 660.

B. Store lighting components on decay-resistant-treated skids at least 12 inches above grade and vegetation. Support poles to prevent distortion and arrange to provide free air circulation.

C. Handle poles so they will not be damaged. Do not use pointed tools that can indent pole surface.

D. Retain factory-applied wrappings on all fixtures, poles, luminaires, and other components unless removal is required for installation. Retain protective wrappings throughout duration of construction process.

E. Handle poles with web fabric straps protect from damage during handling of finish, deformation, and other markings.

1.10 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship; that corrode; or that fade, stain, perforate, erode, or chalk due to effects of weather or solar radiation within specified warranty period. Manufacturer may exclude lightning damage, hail damage, vandalism, abuse, or unauthorized repairs or alterations from special warranty coverage.

1. Contractor shall submit all warranty information in an organized 3-ring binder or folder and digitally organized for each item in and associated with the "Exterior Lighting Device Schedule" to the Client upon completion of the project.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Where specific products are listed, other products may be acceptable, subject to compliance with requirements (refer to EDA Contracting Provisions for Construction Projects Article 10), per Prebid substitution request per Section 012500 Substitutions.

B. Exterior Lighting Device Schedule (Reference "C Product Specifications" below for product description and cut sheet information)

Keynote	Product Description	Quantity
7.1	Step Light (Bega - 2384 LED) or Approved Equal	15 ea.
7.2	Path Light (Forms+Surfaces Light ColumnPathway Bollard Series 500) or Approved Equal	4 ea.
7.3	Uplight Type 1 (trees) (Bega - 7903 LED) or Approved Equal	37 ea.
7.4	Uplight Type 2 (flag pole) (Bega - 7099 LED) or Approved Equal	1 ea.
7.5	Not Used at This Time	
7.6	Exterior Outlet Type 1 (Leviton / smartlockpro® NEMA 5-20R) or Approved Equal	17 ea.
7.7	Exterior Outlet Type 2 (PEDOC 5x5 Hinge Top Outlet Box with Integral Base + (6ea)Leviton / smartlockpro® NEMA 5-20R) or Approved Equal	3 ea.
7.8	Refference design drawings for custom access panel.	1 ea.
7.9	Linear Custom Bench Light (ParadigmLED PL-FLEXSR590-WW-WP-3000K) or Approved Equal	
	A. 2'-5" Long Segment	80 ea
	B. 1'-1 1/2" Long segment	160 ea

Vehicluar Lighting	Product Description	Quantity
E	ATB2 SERIES 284W LED 1A Type 4 4000K CCT W/ HOUSE SIDE SHIELD (ATB2 80BLEDE10) or Approved Equal	4 ea.
H	ATB2 SERIES 284W LED 1050MA TYPE 4 4000K CCT (ATB2 80BLEDE10) or Approved Equal	8 ea.
J	ATB2 SERIES 215W LED 1050MA TYPE 4 4000K CCT W/HOUSE SHIELD (ATB2 60BLEDE10) or Approved Equal	4 ea.
	25 Foot Pole Height (See section 13 under the Product specifcations section of this specification))	12 ea.

C. Product Specifications:

1. **7.1 Step Light (Bega - 2384 LED BRZ) or Approved Equal**

   Housing: Constructed of die-cast and aluminum with integral wiring compartment. Mounting tabs provided. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

   Enclosure: One piece die-cast aluminum faceplate. Clear tempered glass; .125" thick, machined flush to faceplate surface. Faceplate is secured by two (2) flush, socket head, stainless steel captive screws threaded into stainless steel inserts in the housing casting. Continuous high temperature, molded silicone rubber gasket for weather tight operation.

   Electrical: 11.2 W LED luminaire, 14.5 total system watts, -30°C start temperature. Integral 120 V-277 V electronic LED driver, 0 -10 V dimming. The LED and driver are mounted on a removable plate for easy replacement. Standard LED color temperature is 3000K.

   Finish: Manufacturer standard finish polyester powder coat with minimum 3 mil thickness; Bronze (BRZ).

   UL: listed for US and Canadian Standards, suitable for wet locations and for installation within 3 feet of ground. IC rated. Protection class: IP65.

   Luminaire Lumens: 342 - Tested in accordance with LM-79-08

   Available through:

   http://www.bega-us.com/productdetail.aspx?groupid=11c&itemid=5944&familyid=13

2. **7.2 Path Light (Forms+Surfaces Light ColumnPathway Bollard Series 500) or Approved Equal**

   Body: tubular stainless steel.

   Base: stainless steel plate.

   Head: stainless steel cap.

   Lens: 0.125" thick white-frosted acrylic tube.

   LED Driver: Input power is 100-277 VAC. Includes high efficiency constant output current with over-voltage, short circuit, and overload protection. Certifications include: IP66 (waterproof) enclosure and Class 2 rated output (UL 8750)

   LED Light Board - LED 3000K: / 14W / Luminaire lumens: 886

Color temperature: 3000K

Finish: Standard Stainless Steel Finish.

Dimensions Surface Mount with J-bolts: 5" diameter x 9.75" high

Available through:

Forms+Surfaces
30 Pine Street
Pittsburgh, PA 15223
phone: 800-451-0410

fax: 412-781-7840

email: sales@forms-surfaces.com website: www.forms-surfaces.com

3. **7.3 Uplight Type 1 (Trees) - (Bega - 7903 LED) or Approved Equal**

Housing: Reinforced polymide synthetic housing for maximum corrosion resistance.

Lamp Enclosure: Clear safety glass with pure anodized aluminum reflector. Fully gasketed using one piece molded silicone gasket for weather tight operation.

Electrical: 4.5W LED luminaire, 6 total system watts, -30°C start temperature. Integral 12V AC driver provided must be operated using remote magnetic transformer. Standard LED color temperature is 3000K with a >80 CRI.

Mounting: Provided with a reinforced polymide earth spike.

Finish: BEGA Black (BLK).

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Available through:

http://www.bega-us.com/productdetail.aspx?groupid=137903&itemid=7218&familyid=33

4. **7.4 Uplight Type 2 (Flag Pole) - (Bega - 7099 LED) or Approved Equal**

Enclosure: Heavy gauge stainless steel. Provided with two external clamps that secure the luminaire in a pre-cored hole prepared by Contractor.

Trim Ring: Heavy gauge, machined stainless steel secured to the inner housing with captive, stainless steel fasteners. Trim is sealed in place using molded, one piece high temperature silicone gasket. Glass is tempered, ½" thick machined flush to trim ring.

Electrical: 13W LED luminaire, 15.5 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED color temperature 3000K (>80 CRI); add suffix K3 to order. Inner housing pre-wired with nine (9) feet of 18/3 water stopper cable, cable clamp, and waterproof cable gland entry into housing. A separate weatherproof wiring box for power supply must be provided (by contractor).

Adjustable Optical Assembly: Consists of pressed glass, faceted anodized aluminum reflector. Spread lenses may be added as available options. Precise aiming is achieved by adjusting reflector assembly 180° horizontal and up to 30° vertical in 5° increments and locking in place with integral set screw. Final adjustment to take place at night with Landscape Architect on site.

Finish: Manufacturer standard - Machined #4 brushed stainless steel.

Load Limits: These luminaires are designed to bear pressure loads up to 4400 lbs. from vehicles with pneumatic tires. The luminaires must not be used for traffic lanes where they are subject to horizontal pressure from vehicles braking, accelerating and changing direction.

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP68 10m

Luminaire Lumens: 596 Tested in accordance with LM-79-08

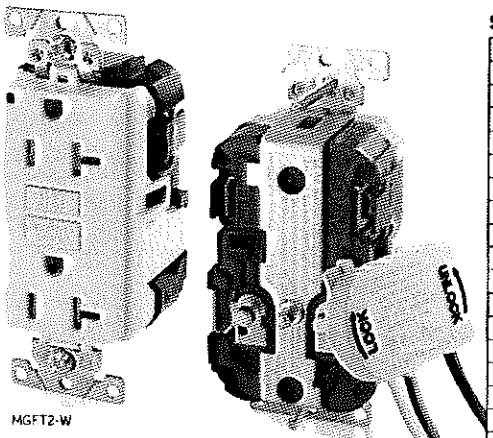
Available through:

http://www.bega-us.com/productdetail.aspx?groupid=159b&itemid=7070&familyid=18

~~5. NOT USED AT THIS TIME~~

6. **Exterior Outlet Type 1 (Leviton / smartlockpro® NEMA 5-20R) and provided metal shield cover plate or Approved Equal**

Lev-Lok® Self-Test GFCI Receptacles



MGFT2-W

Specifications

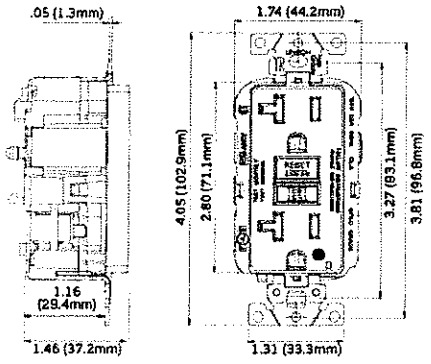
AC Horsepower Rating	
At Rated Voltage	1 HP
Electrical Specifications	
Grounding	Self-Grounding
Pole	2
Wire	3
Short Circuit Current Rating	2kA
Feed-Thru Current	20A
Environmental Specifications	
Flammability	Rated V-0 per UL 94
Operating Temperature	-35°C to +66°C
Material Specifications	
Face Material	PBT
Body Material	Polycarbonate
Terminal Screws (Load Side)	Plated Steel
Terminal Clamp	Brass
Line Contacts	Brass
Strap Material	Galvanized Steel
Ground Clip	Brass
Shutter Mechanism (TR Only)	Acetal
Mechanical Specifications	
Product ID	Ratings are permanently marked on device
Line Side Termination	Leviton Cat. MSTWL Wiring Modules
Load Side Termination	#14- #10 AWG Solid or Stranded
Standards & Certifications	
NEMA	WD-1 & WD-6
ANSI	C-73
Certification/Listing	cULus, NOM-ANCE
Applicable Standards	UL 943, UL 498, CSA C22.2 No. 42 & 144, FedSpec W-C-596
Warranty	
Product Warranty	2 Year Limited

Ordering Information

Extra-Heavy Duty Industrial Grade Lev-Lok Self-Test GFCI Receptacles				
Color	Cat. No.		Cat. No.	
	NEMA 5-15R		NEMA 5-20R	
	15A-125V @ Receptacle 20A-125V Feed-Through		20A-125V @ Receptacle 20A-125V Feed-Through	
	Non-TR	TR	Non-TR	TR
Brown	MGFN1	MGFT1	MGFN2	MGFT2
Ivory	MGFN1-I	MGFT1-I	MGFN2-I	MGFT2-I
White	MGFN1-W	MGFT1-W	MGFN2-W	MGFT2-W
Black	MGFN1-E	MGFT1-E	MGFN2-E	MGFT2-E
Gray	MGFN1-GY	MGFT1-GY	MGFN2-GY	MGFT2-GY
Lt. Almd	MGFN1-T	MGFT1-T	MGFN2-T	MGFT2-T
Red	MGFN1-R	MGFT1-R	MGFN2-R	MGFT2-R

Extra-Heavy Duty Hospital Grade Lev-Lok Self-Test GFCI Receptacles				
Color	Cat. No.		Cat. No.	
	NEMA 5-15R		NEMA 5-20R	
	15A-125V @ Receptacle 20A-125V Feed-Through		20A-125V @ Receptacle 20A-125V Feed-Through	
	Non-TR	TR	Non-TR	TR
Brown	MGFN1-HG	MGFT1-HG	MGFN2-HG	MGFT2-HG
Ivory	MGFN1-HGI	MGFT1-HGI	MGFN2-HGI	MGFT2-HGI
White	MGFN1-HGW	MGFT1-HGW	MGFN2-HGW	MGFT2-HGW
Black	MGFN1-HGE	MGFT1-HGE	MGFN2-HGE	MGFT2-HGE
Gray	MGFN1-HGG	MGFT1-HGG	MGFN2-HGG	MGFT2-HGG
Lt. Almd	MGFN1-HGT	MGFT1-HGT	MGFN2-HGT	MGFT2-HGT
Red	MGFN1-HGR	MGFT1-HGR	MGFN2-HGR	MGFT2-HGR

Typical for MGFT2-HG



Additional Features & Benefits

- Only Modular GFCI currently available on the market with feed-through terminals for downstream protection
- All modules have a Circuit ID Label for ease of identification
- Solid brass locking pins for strong, secure connection between receptacle & wiring module
- Use with Leviton Cat. MSTWL series wiring modules - available with stranded or solid leads as well as push wire connectors
- Wallplate and wiring module not included

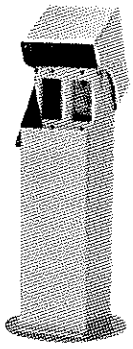
Additional Related Product Offerings available @ www.leviton.com

8. Exterior Outlet Type 2 (PEDOC 5x5 Hinge Top Outlet Box with Integral Base + Leviton / smartlockpro® NEMA 5-20R) or Approved Equal

PEDOC™ SPECIFICATIONS for 5x5 Hinge Top model with Integral Base

2 Gang, 2 Gang Divided or 30 A

- Material is 14 ga. stainless steel (polished or powder coated).
- Overall width including cover is 6.3", depth is 5.25".
- Post dimensions 5" x 5".
- Available lengths are 18", 24", 30", 36", 42" or 48".
- Base is 8" diameter, with (4x) 7/16" holes for mounting.
- Open base allows for accommodation of 2 conduit raceways 1-1/2" ea. max.
- (4x) anchors, washers and acorn nuts are provided for mounting the base.
- Integral hinged cover is self closing and can be locked whether in use or not.
- Each unit is provided with a ground conductor terminal.
- Models can be divided to allow for high/low voltage applications. Divided models include a separating bracket welded to the inside of the housing.
- Accessory opening 2 gang, or 30 A opening. Divided 2 gang models have two additional holes on device mounting plate for low voltage data/voice.
- Device mounting plate is removable and is provided with holes for installation of GFCI (2) receptacles 20 A max, or (1) receptacle 30 A max. *Note: 1 device mounting plate provided per unit. Model number reflects desired mounting plate.*
- UL Listed
- NEMA Type 3R





PEDOC Power Solutions 600 W. Carboy Road Mt. Prospect, IL 60056 847-815-6125
www.pedocpower.com info@pedocpower.com

9. **Linear Custom Bench Light (ParadigmLED PL-FLEXSR590-WW-WP-3000K) and (PL AMC-2206) or Approved Equal.**

Reference Product Sheets Next (2) Pages.

ParadigmLED.com
6753 E. 47th Ave Unit H Denver, CO 80216
P: 303.349.0386

Project: _____
Type: _____
Location: _____
Contact Phone: _____

FLEXSR590 SERIES

PRODUCT DESCRIPTION

FlexSR590 series is flexible LED Liner ribbon, with 90+ CRI, that allows for LED lighting in a number of applications. Architectural coves, wall slot , under cabinets, stair treads , and handrails are all viable applications for this product . At 4.5W/ft , Flex500 Series is one of the brightest and smallest products available. Product is rated 24VDC and is available in 2700K, 3000K, 4000K, 5000K, Red, Blue, Green, Amber , and RGB. Interior (Damp) , Wet Location (Wet).

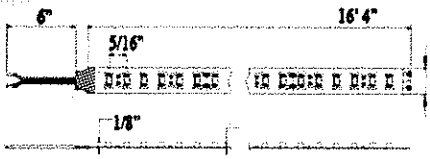
PRODUCT SPECIFICATIONS

Electrical	: 24VDC, 4.5W/ft, 16ft max, no more than 22ft per 100watt secondary output (16.4' per reel), 3.0A per reel.
Dimensions	: Interior Series : 3/8"W x 1/16"H Weather Proof: 1/2"W x 1/8"H
Color Temperature	: White(5,000K), Warm White(3000K), Red, Blue, Green, Amber and RGB.
Dimming	: Available with ParadigmLED dimming power supplies (magnetic low-voltage 90+ CRI dimming).
Mounting	: 3M double stick mounting tape pre-affixed . Optional Silicone, Optional Mounting Channel, Optional Lens.
Connectors	: Field- installed flexible mounting connectors .
Power Supply	: Dimmable 60W, 100W, 200W or larger available. See power supply cutsheets. All power supplies are rated UL 2108
Label	: UL listed.

c UL us

ACCESSORIES

Cat. No.	Description
PL- LWC-6	6' Field installed lead wire clamp
PL-MiniAMC	Mini Mounting Channel-Various sizes, see spec sheet



SPECIFICATION DETAILS

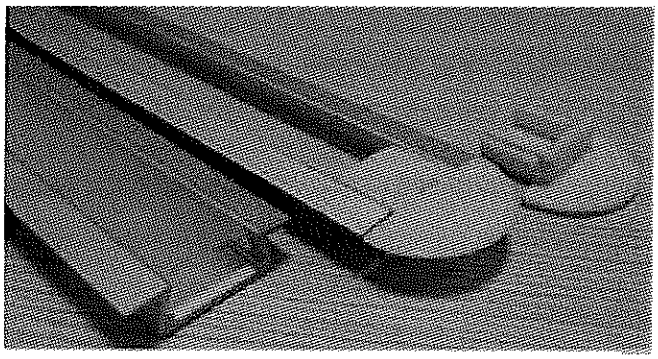
Cat. Number	Length	Voltage	Wattage	Color	LED Life	Application
INTERIOR						
PL-FLEXSR590-WH-INT-24	16.4'/reel	24VDC	4.5W/ft	White (5000k)	50 ,000 hrs.	Interior
PL-FLEXSR590-WW-INT-3000K	16.4'/reel	24VDC	4.5W/ft	Warm White (3000k)	50 ,000 hrs.	Interior
PL-FLEXSR590-WW-INT-2700K	16.4'/reel	24VDC	4.5W/ft	Warm White (2700k)	50 ,000 hrs.	Interior
PL-FLEXSR590-RR-INT-24	16.4'/reel	24VDC	3.6W/ft	Red	50 ,000 hrs.	Interior
PL-FLEXSR590-GG-INT-24	16.4'/reel	24VDC	3.5W/ft	Green	50 ,000 hrs.	Interior
PL-FLEXSR590-BB-INT-24	16.4'/reel	24VDC	3.6W/ft	Blue	50 ,000 hrs.	Interior
PL-FLEXSR590-AA-INT-24	16.4'/reel	24VDC	4.5W/ft	Amber	50 ,000 hrs.	Interior
PL-FLEXSR590-RGB-INT-24	16.4'/reel	24VDC	4.5W/ft	RGB	50 ,000 hrs.	Interior
EXTERIOR						
PL-FLEXSR590-WH-WP-24	16.4'/reel	24VDC	4.5W/ft	White (5000k)	50,000 hrs.	Exterior
PL-FLEXSR590-WW-WP-3000K	16.4'/reel	24VDC	4.5W/ft	Warm White (3000k)	50 ,000 hrs.	Exterior
PL-FLEXSR590-WW-WP-2700K	16.4'/reel	24VDC	4.5W/ft	Warm White (2700k)	50 ,000 hrs.	Exterior
PL-FLEXSR590-RR-WP-24	16.4'/reel	24VDC	3.6W/ft	Red	50 ,000 hrs.	Exterior
PL-FLEXSR590-GG-WP-24	16.4'/reel	24VDC	3.6W/ft	Green	50 ,000 hrs.	Exterior
PL-FLEXSR590-BB-WP-24	16.4'/reel	24VDC	3.6W/ft	Blue	50 ,000 hrs.	Exterior
PL-FLEXSR590-AA-WP-24	16.4'/reel	24VDC	4.5W/ft	Amber	50 ,000 hrs.	Exterior
PL-FLEXSR590-RGB-WP-24	16.4'/reel	24VDC	4.5W/ft	RGB	50,000 hrs.	Exterior

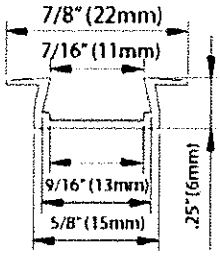
ParadigmLED.com
6753 E. 47th Ave Unit H Denver, CO 80216
P. 303 399 0386

PL-AMC-2206

PL-OLC-2206 - OPAL
PL-FLC-2206 - FROSTED
PL-CLC-2206 - CLEAR

PL-EC-2206 - END CAP
PL-ECL-2206 - END CAP
W/LEAD WIRE



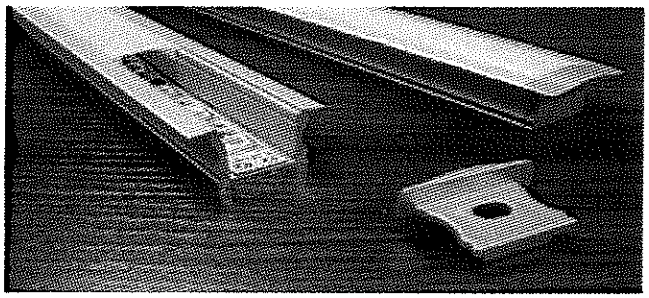


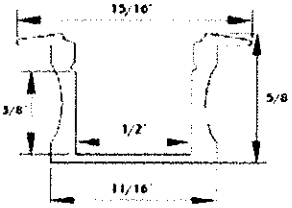
*Compatible with all single row LED's, both interior and weatherproof

PL-AMC-2512

PL-OLC-2512 - OPAL
PL-FLC-2512 - FROSTED
PL-CLC-2512 - CLEAR

PL-EC-2512 - END CAP
PL-ECL-2512 - END CAP
W/LEAD WIRE

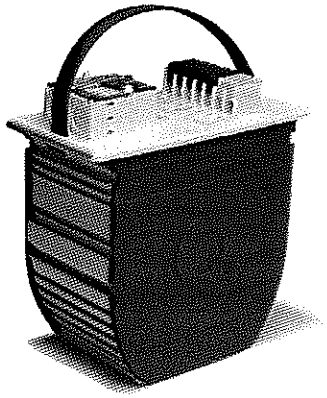




*Compatible with all single row LED's, both interior and weatherproof

10. Standard In-grade Transformers / Power Supply and Housing (Q-Set 2) and (Q-Vault-5) or Approved Equals. Contractor is responsible for sizing of transformers per manufacturer specification and final circuitry layout by MEP. Engineer through Shop Drawings and Product Submittal.

Q-SET 2



Multi-Volt & Taps

The Q-SET-2 Luminaire Power Supply Center utilizes two (2) primary taps, a switch or dimmed tap to compensate for losses when dimming. Five (5) secondary taps provide nominal secondary voltages of:

Label	(-)	(start)	(+)	(++)	(+++)
	↓	↓	↓	↓	↓
12V =	11V,	12V,	13V,	14V,	& 15V
24V =	22V,	24V,	26V,	28V,	& 30V

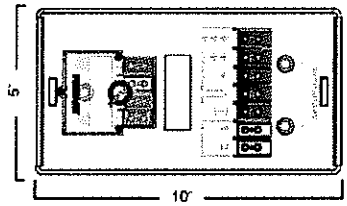
Loads may be connected to one or more of the secondary taps up to the full watt rating of the Q-SET-2. The advantage is that loads at varying distances from the Q-SET-2 can be connected to different taps to recover voltage drop and produce between 95% - 100% light output.

Primary Circuit Protection

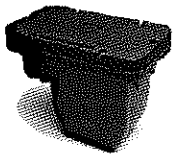
All 120V units come with both a primary and secondary, hydraulic, magnetic circuit breaker. All have a primary auto-reset thermal protector, which is built into the transformer. This thermal protector will temporarily disconnect the primary if the transformer overheats due to an overload or saturation from a faulty dimmer.

Secondary Circuit Protection

Q-SET-2 comes with two (2) secondary breakers.



(Must be purchased with Q-VAULT-5)



CSA Certified for both the U.S. and Canada-cULus listing

- FOR SUPPLY CONNECTIONS USE WIRE RATED FOR AT LEAST 90 C
- SUITABLE FOR INGROUND INSTALLATION
- USE DIMMERS RATED FOR MAGNETIC LOW VOLTAGE LOAD
- NOT FOR INSTALLATION TO CONDUIT EXTENDING DIRECTLY TO AN UNDERWATER POOL LIGHT FORMING SHELL
- SUITABLE FOR USE WITH SUBMERSIBLE LUMINARIES
- SUITABLE FOR INDOOR & OUTDOOR USE
- WARNING - RISK OF FIRE - IF INSTALLATION INVOLVES RUNNING WIRING THROUGH A BUILDING STRUCTURE, SPECIAL WIRING METHODS ARE NEEDED. CONSULT A QUALIFIED ELECTRICIAN

Q-SET 2 Ordering &Specification Guide

Model: 1 - Primary V.: 2 / Secondary V.: 3

1. Model	Secondary Breakers	Breaker Amperage
12V		
QSET-360	2	15
QSET-480	2	20
QSET-600	2	25
24V		
QSET-360	2	7.5
QSET-480	2	10
QSET-600	2	12.5

2. Primary Voltage
120V / 220V / 240V 277V(60Hz) / 230V(50Hz)

3. Secondary Voltage - 12VAC / 24VAC

Q-SET Volt Rating	Secondary (CB) Size	Total (CB) Load	Number of (CB)	Total Q-SET Load
12V @	15A=	180W	x 2	= 360W
12V @	20A=	240W	x 2	= 480W
12V @	25A=	300W	x 2	= 600W
24V @	7.5A=	180W	x 2	= 360W
24V @	10A=	240W	x 2	= 480W
24V @	12.5A=	300W	x 2	= 600W

*(CB) = Circuit Breaker

Ordering Example:
QSET-600 - 120/12

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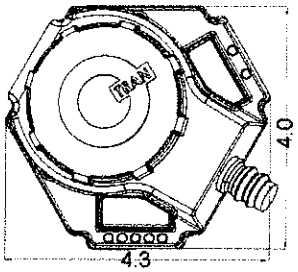
11. Tree Up lighting Required Transformer / Power Supply and Housing (Q-Hex Mini Transformer Unit) and (Q-Trix-R50) or Approved Equal. Contractor is responsible for sizing of transformers per manufacturer specification and final circuitry layout by MEP. Engineer through Shop Drawings and Product Submittal.

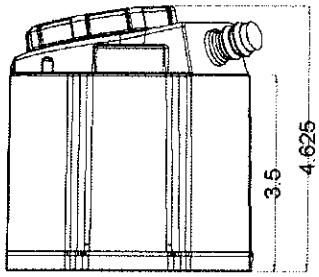
Q-HEX MINI

Q-HEX MINI: Transformer Unit

Model Numbers:

Q-HEX-M10W
Q-HEX-M20W
Q-HEX-M50W
Q-HEX-M75W
Q-HEX-M10W-DC
Q-HEX-M20W-DC
Q-HEX-M60W-DC





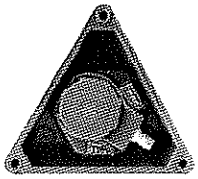
Product Description:
An outdoor direct burial enclosure.

Q-HEX Mini is designed for used in the Q-Trix R-50. This small unit can accomodate loads up to 75W and have output voltages of either 12V AC or DC.



Transformer Unit
With Breaker

(Must be purchased with Q-TRIX R-50)



See Voltage Drop Calculator at www.q-tran.com

Q-HEX MINI Ordering & Specification Guide

Model Primary V. Secondary V.

1 - **2** / **3**

Transformer Model	Breaker	Amperage
Q-HEX-M10W	1	4A
Q-HEX-M20W	1	4A
Q-HEX-M50W	1	4A
Q-HEX-M75W	1	6.25A
Q-HEX-M10W-DC	1	5A
Q-HEX-M20W-DC	1	5A
Q-HEX-M60W-DC	1	5A

Primary Voltage:
120V(60Hz) 277V(60Hz)

Secondary Voltage: 12VAC / 12VDC

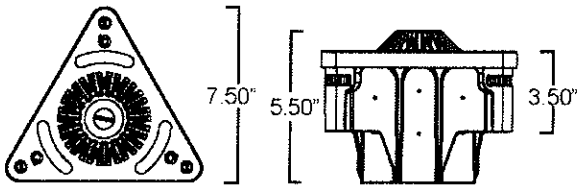
Ordering Example:
QHEX-M10W - 120/12

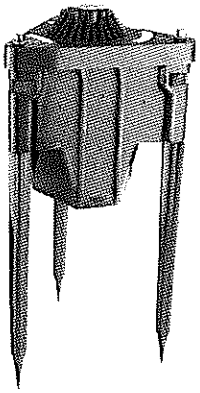
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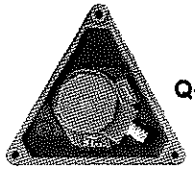
Q-TRIX-R50

(Q-TRIX-REMOTE 50 cu" Splice Box / 10-75W Power Supply Housing)

Module Number: Q-TRIX-R50







Q-TRIX enclosure used with **Q-HEXmini** Power Pak



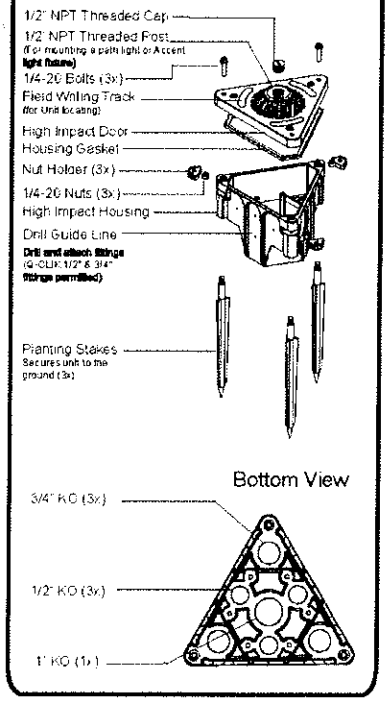
Q-TRIX enclosure used as a Splice Box



Mount Lighting Fixture:

Path or Accent Light Fixture.

Q-TRIX (R) Remote Box Details



12. **Street and Parking Lighting:**
    American Electric Lighting
    Autobahn Series ATB2 or Approved Equal

    House shielding shall be provided for all fixtures adjacent to property lines to meet City's requirements for lighting levels at property line.

13. **Street and Parking Lighting Poles**
    Valmont
    Soft Square DS330 Steel or approved equal
    Color: Black
    Base: Full Base Cover
    Wind Speed Design: 100 MPH

2.2 GENERAL REQUIREMENTS FOR LUMINAIRES

A. Luminaires shall comply with UL 1598 and be listed and labeled for installation in wet locations by an NRTL acceptable to authorities having jurisdiction.

1. LER Tests Incandescent Fixtures: Where LER is specified, test according to NEMA LE 5A.
2. LER Tests Fluorescent Fixtures: Where LER is specified, test according to NEMA LE 5 and NEMA LE 5A as applicable.
3. LER Tests HID Fixtures: Where LER is specified, test according to NEMA LE 5B.

B. Lateral Light Distribution Patterns: Comply with IESNA RP-8 for parameters of lateral light distribution patterns indicated for luminaires.

C. Metal Parts: Free of burrs and sharp corners and edges.

D. Sheet Metal Components: Corrosion-resistant aluminum unless otherwise indicated. Form and support to prevent warping and sagging.

E. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed luminaires.

F. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses. Designed to disconnect ballast when door opens.

G. Exposed Hardware Material: Stainless steel.

H. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.

I. Light Shields: Metal baffles, factory installed and field adjustable, arranged to block light distribution to indicated portion of normally illuminated area or field.

J. Reflecting surfaces shall have minimum reflectance as follows unless otherwise indicated:

1. White Surfaces: 85 percent.
2. Specular Surfaces: 83 percent.
3. Diffusing Specular Surfaces: 75 percent.

K. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps and ballasts. Labels shall be located where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.

1. Label shall include the following lamp and ballast characteristics:

a. "USES ONLY" and include specific lamp type.
b. CCT and CRI for all luminaires.

PART 3 - EXECUTION

3.1 LUMINAIRE INSTALLATION

A. All luminaire installation shall be in accordance with manufacturer instructions and Contract Drawings.

B. Adjust luminaires that require field adjustment or aiming at night, with Civil Engineer and Landscape Architect present.

1. Contractor is responsible for notifying Civil Engineer and Landscape Architect a minimum of (15) days prior to field adjustment of fixtures.

3.2 POLE INSTALLATION

A. Alignment: Align pole foundations and poles for optimum directional alignment of luminaires and their mounting provisions on the pole.

B. Clearances: Maintain the following minimum horizontal distances of poles from surface and underground features unless otherwise indicated on Drawings:

1. Fire Hydrants and Storm Drainage Piping: **60 inches**

2. Water, Gas, Electric, Communication, and Sewer Lines: **10 feet**.
3. Trees: **10 feet (Tree Trunck)**.

C. Concrete Pole Foundations: Set anchor bolts according to anchor-bolt templates furnished by pole manufacturer. Concrete materials, installation, and finishing requirements are specified in Section 033000 "Cast-in-Place Concrete."

D. Foundation-Mounted Poles: Mount pole with leveling nuts, and tighten top nuts to torque level recommended by pole manufacturer.

1. Use anchor bolts and nuts selected to resist seismic forces defined for the application and approved by manufacturer.
2. Grout void between pole base and foundation. Use nonshrink or expanding concrete grout firmly packed to fill space.
3. Install base covers unless otherwise indicated.
4. Use a short piece of 1/2-inch- (13-mm-) diameter pipe to make a drain hole through grout. Arrange to drain condensation from interior of pole.

E. Raise and set poles using web fabric slings (not chain or cable).

F. Ensure that no trenching, conduit, or footings encroach on proposed tree root balls.

3.3 BOLLARD LUMINAIRE INSTALLATION

A. Align units for optimum directional alignment of light distribution.

B. Install on concrete base as shown in Contract Drawings. Cast conduit into base, and shape base to match shape of bollard base. Finish by troweling and rubbing smooth. Concrete materials, installation, and finishing are specified in Section 033000 "Cast-in-Place Concrete."

C. Ensure that no trenching, conduit, or footings encroach on proposed tree root balls.

3.4 INSTALLATION OF INDIVIDUAL GROUND-MOUNTING OR OTHER SITE LUMINAIRES

A. Align units as shown in Contract Drawings.

B. Install on concrete base as shown in Contract Drawings. Cast conduit into required base or adjacent elements as shown in Contract Drawings. Concrete materials, installation, and finishing are specified in Section 033000 "Cast-in-Place Concrete."

C. Ensure that no trenching, conduit, or footings encroach on proposed tree root balls.

3.5 CORROSION PREVENTION

A. Aluminum: Do not use in contact with earth or concrete. When in direct contact with a dissimilar metal, protect aluminum by insulating fittings or treatment.

B. Steel Conduits: Comply with Section 260533 "Raceways and Boxes for Electrical Systems." In concrete foundations, wrap conduit with 0.010-inch thick, pipe-wrapping plastic tape applied with a 50 percent overlap.

3.6 GROUNDING

A. Ground metal poles and support structures according to Section 260526 "Grounding and Bonding for Electrical Systems."

1. Install grounding electrode for each pole unless otherwise indicated.
2. Install grounding conductor pigtail in the base for connecting luminaire to grounding system.

B. Ground nonmetallic poles and support structures according to Section 260526 "Grounding and Bonding for Electrical Systems."

1. Install grounding electrode for each pole.
2. Install grounding conductor and conductor protector.
3. Ground metallic components of pole accessories and foundations.

3.7 FIELD QUALITY CONTROL

A. Inspect each installed fixture for damage. Replace damaged fixtures and components.

B. Illumination Observations: Verify normal operation of lighting units after installing luminaires and energizing circuits with normal power source.

C. Illumination Tests:

1. Measure light intensities at night. Use photometers with calibration referenced to NIST standards. Comply with the following IESNA testing guide(s):

a. IESNA LM-5, "Photometric Measurements of Area and Sports Lighting Installations."
b. IESNA LM-50, "Photometric Measurements of Roadway Lighting Installations."
c. IESNA LM-52, "Photometric Measurements of Roadway Sign Installations."
d. IESNA LM-64, "Photometric Measurements of Parking Areas."
e. IESNA LM-72, "Directional Positioning of Photometric Data."

D. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

E. Site Design Inspection: Complete a final site inspection with Civil Engineer and Landscape Architect at night for final approval of lighting installation and adjustments.

3.8 DEMONSTRATION

A. Train Owner's maintenance personnel to adjust, operate, and maintain all luminaires and lowering devices.

END OF SECTION 265600