

LEDGES STATE PARK
CAMPGROUND RENOVATION AND ENTRANCE PORTAL
BOONE COUNTY, IOWA
PROJECT NO. 17-02-08-02

November 9, 2017

This Addendum is issued to modify, explain or correct the original Drawings and Specifications, and is hereby made a part of the Contract Documents. Please attach this Addendum to the Project Manual in your possession. Insert the number and issue date of this Addendum in the blank space provided on the Proposal Form.

SPECIFICATIONS

- A. 00120 Special Notice to Contractors
 - a. Updated
- B. 00300 Proposal
 - a. Updated Bid Items
- C. 16000 Electrical
 - a. Updated

PLANS

- A. B.08, C.01, C.02, D.08, D.10, D.11
 - a. Updated plan sheets.

SPECIAL NOTICE TO CONTRACTORS

CONTRACTOR IS RESPONSIBLE FOR CONTACTING STATE STORMWATER PROGRAM COORDINATOR (515/725-8417) FOR INFORMATION RELATING TO STORM WATER PERMIT THAT IS NECESSARY IF CONSTRUCTION ACTIVITIES DISTURB ONE ACRE OR MORE.

CONTRACTOR IS RESPONSIBLE FOR CONTACTING STATE STORMWATER PROGRAM COORDINATOR (515/725-8417) FOR INFORMATION RELATING TO STORM WATER PERMIT THAT IS NECESSARY IF CONSTRUCTION ACTIVITIES DISTURB ONE ACRE OR MORE.

Project Cost Estimate: \$720,000.00

Direct questions concerning the Project Design, Drawings and Specifications to:

Troy Duff
Project Manager
502 East 9th Street
Des Moines, IA 50319
Ph: (515) 250-3715

Direct questions concerning Site Review and Project Inspection to:

Don Labate, P.E.
District Engineer
Ph: (515) 250-3714
Fax: (xxx) xxx-xxxx

Direct questions concerning Bidding and Contract Procedures to:

Kim Bohlen, DNR Procurement
Wallace State Office Building
Des Moines, Iowa 50319-0034
Telephone: 515/725-0733

In accordance with House File 2622 implemented by Iowa Code Sections 442.42 (15) & (16) and 422.47.47(5), Contractors may purchase qualifying items for work on this contract exempt from sales tax. The DEPARTMENT will issue an authorization letter and exemption certificate to the prime contractor and each approved subcontractor." *Complete information on qualifying materials and supplies can be found at www.state.ia.us/tax, the Iowa Department of Revenue and Finance (IDRF) Web site. Links are found in the Business Taxes and Local Government categories. 701 IAC 19.1-20 is found in Tax Research/Tax Research Library.*

Recorded bid results can be accessed at <https://programs.iowadnr.gov/engreal/projectlist.asp>. Printed bid tabs will not be available for 3 working days after the Letting date.

Time and Date of Letting **11:00 AM, November 16, 2017**

PROPOSAL

Project No. **17-02-08-02**

Project Description and Location

**Campground Renovation and Entrance Portal
Ledges State Park
Boone County, Iowa**

Proposal of: _____
(Name of Bidder)

Located at: _____ () _____
(Address) (Area) (Telephone)

Amount of Proposal Guarantee	Specified completion date or Number of Working Days	Approx. or Specified Starting Date or Number of Working Days	Liquidated Damages Per Day
\$36,000	5/1/2019	January 1, 2018	\$500.00

The undersigned hereby agrees, if awarded the contract, to execute the proposed contract and to furnish an approved performance bond in a amount not less than 100 percent of the contract award within 30 days after the date of approval of award of the contract, and to provide all labor, materials, and equipment required to complete the project designated above, for the price hereinafter set forth, in strict compliance with the contract documents prepared by the Iowa Department of Natural Resources.

The undersigned agrees, if awarded the contract, to commence the work within a reasonable time after the preconstruction conference or by the specific starting date, if so specified, and to complete the work within the contract period, or to pay liquidated damages in the amount stipulated herein for each calendar day the work remains uncompleted after the expiration of the contract period or any authorized reduction thereof.

A proposal guarantee in the amount stipulated herein is included with this proposal, to be forfeited to the Iowa Department of Natural Resources if the undersigned fails to execute the contract and furnish an approved performance bond, if awarded the contract.

By virtue of statutory authority, preference will be given to products and provisions grown and coal produced within the state of Iowa, and also, a resident bidder shall be allowed a preference against a nonresident bidder from a state or foreign country which gives or requires a preference to bidders from that state or foreign country on projects in which there are no federal funds involved.

BY

(Iowa Contractor Registration No.)

(Signed) _____
(Date)

(FID/EIN/SSN)

(Phone Number) _____
(Fax Number)

(Email Address)

By signing and submitting the proposal, the bidder:

1. Gives an unsworn declaration on behalf of each person, firm, association, partnership, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such contract, and is not under debarment currently by the Federal government for a criminal violation which is reasonably related to bidding and contracting procedures; and
2. Affirms to have examined the plans, specifications, and job site to become acquainted with the adjacent areas, means of approach to the site, conditions of the actual job site, and the facilities for delivering, storing, placing, and handling of materials and equipment.

SCHEDULE OF PRICES

Project Description and Location

Campground Renovation and Entrance Portal, Boone County, Iowa

Name of Bidder

THE "UNIT PRICE" AND "AMOUNT" COLUMNS MUST BE FILLED IN FOR THIS PROPOSAL TO BE CONSIDERED COMPLETE. IF THERE IS A DISCREPANCY BETWEEN UNIT BID PRICES, EXTENSIONS, OR TOTAL AMOUNTS OF BID, THE UNIT PRICES SHALL GOVERN.

Item No.	Description	Estimated Quantity	Unit Price	Amount
1	Mobilization	1 Lump Sum		
2	Tree Removal	1 Lump Sum		
3	Clearing and Grubbing	1 Lump Sum		
4	Excavation, Class 10, 6" Camp Pad Core Out	1556 CY		
5	Macadam Stone Base, 4" Depth	1802 Tons		
6	3/8 Minus Crushed Stone, 2" Depth	1000 Tons		
7	Engineering Fabric	9338 SY		
8	NPDES General Permit #2 & SWPPP	1 Lump Sum		
9	2" PVC SDR 21 Water Line	1187 LF		
10	1" HDPE Water Line	350 LF		
11	2 1/2" Flushing Hydrant	3 Each		
12	Yard Hydrant	15 Each		
13	Detectable Warning Tape, 3" Water	1537 LF		
14	6" x 6" x 4" PVC Wyes	23 Each		
15	Curb Stop/Valve Box	15 Each		
16	Corporation Stop	15 Each		
17	4" x 2" Tees	2 Each		
18	System Disinfection	1 Lump Sum		
19	6" SDR 35 PVC Sewer Pipe	980 LF		
20	4" SDR 35 PVC Sewer Pipe	570 LF		
21	Detectable Warning Tape, 3" Sewer	1904 LF		
22	2" SDR 11 HDPE Sewer Pipe	354 LF		
23	Duplex Grinder Pump Station with Control and Alarm Panel, Complete	1 Lump Sum		

24	Sanitary Sewer Cleanout Assembly	12 Each		
25	RV Sewer Cleanout Assembly	15 Each		
26	Manhole, Complete	1 Lump Sum		
27	Excavation, Class 10, 12" Core Out	504 CY		
28	Special Backfill, 6" Depth	476 Tons		
29	Hot Mix Asphalt, Standard Traffic, 2" Base Course, ¾" Mix	168 Tons		
30	Hot Mix Asphalt, Standard Traffic, 2" Intermediate Course, ¾" Mix	168 Tons		
31	Hot Mix Asphalt, Standard Traffic, 2" Surface Course, ½" Mix	168 Tons		
32	Asphalt Binder, PG 58 – 28S	51 Tons		
33	Road Widening	1 Lump Sum		
34	Pad Mounted 800 Amp Distribution Panel and CT Cabinet & Connections, Complete	1 Each		
35	Pad Mounted 600 Amp Distribution Panel and CT Cabinet & Connections, Complete	2 Each		
36	Pad Mounted 400 Amp Distribution Panel and CT Cabinet & Connections, Complete	2 Each		
37	Single Campsite Outlet Post – 50 Amp	68 Each		
38	Double Campsite Outlet Post – 50 Amp	2 Each		
39	No. 8 AWG Grounding Conductor Cable, Type THW or USE	255 LF		
40	No. 6 AWG Grounding Conductor Cable, Type THW or USE	820 LF		
41	No. 4 AWG Grounding Conductor Cable, Type THW or USE	472 LF		
42	No. 2 AWG Grounding Conductor Cable, Type THW or USE	5157 LF		
43	No. 4 AWG Single Conductor Cable, Type USE	765 LF		
44	No. 1/0 Single Conductor Cable, Type USE	2460 LF		
45	No. 2/0 Single Conductor Cable, Type USE	210 LF		
46	No. 4/0 Single Conductor Cable, Type USE	9349 LF		
47	No. 250 MCM Single Conductor Cable, Type USE	1188 LF		
48	No. 300 MCM Single Conductor Cable, Type USE	2475 LF		
49	No. 350 MCM Single Conductor Cable, Type USE	2757 LF		
50	Roadway Crossing Conduit – Schedule 80 PVC	164 LF		
51	Detectable Warning Tape, 3" Electric	5447 LF		

52	Trench, Single Circuit Secondary	5528 LF		
53	Remove and Dispose of Low Level Lighting Bollards	12 Each		
54	Replace HPS Lights with LED Fixtures	5 Each		
55	Entrance Portal, Complete	1 Lump Sum		
56	Seeding, Fertilizing and Mulching	1 Lump Sum		
57	6" Non-perforated PE Tubing	700 LF		
58	6"x6"x6" PE Tees	4 Each		
59	6" x 5' Steel Riser w/Trash Guard	4 Each		
60	6" CMP with Animal Guards	20 LF		
		TOTAL		

Bidder Acknowledges Receipt of Any Issued Addenda Below (Number and Date)

PART 1 - GENERAL

1.01 SUMMARY:

- A. Section Includes: Providing all material, tools, equipment, and labor necessary to complete the following:
1. Provide complete and functioning electrical power transmission, services and systems as shown on the Drawings, as specified herein, and as required for a complete and proper installation of a campground electrical system including, but not limited to:
 - a. Electrical service, complete, of size, voltage and type indicated or required to point of connection with utility company's equipment; all conductors shall be copper.
 - b. Service entrance with metering equipment and feed switches or breakers.
 - c. Main distribution panels and distribution panels or boards as needed.
 - d. Complete feeder system, underground, from the main distribution panels to individual campsite power outlets and branch panels.
 - e. Complete branch circuit wiring for receptacles, junction boxes, area lighting, and similar uses.
 - f. Exterior lighting fixtures, lamps and poles, terminal and splice boxes, campsite power outlets, switches, receptacles, controls, and motors, motor starters, detectable tape, and similar items.
 - g. Hangers, anchors, sleeves, bushings, conduits, conduit risers and elbows, supports for fixtures, equipment mounting structures, transformer pads and other electrical materials and equipment in association therewith.
 - h. Trenching and backfilling for underground electrical installation not specified elsewhere.
 - i. Connections to distribution panels in Buildings or existing utility company equipment, as shown on the Drawings.
 2. The omission of direct reference to an essential part, the necessity or use of which is reasonably implied shall not release the Contractor from providing the same.
 3. Inspect the site as necessary to become familiar with all existing conditions affecting the performance of the work under this Contract. Extras will not be allowed for failure to do so.
- B. Related Sections: Drawings and General Provisions of the contract, including the General Covenants and Provisions, Supplementary Covenants and Provisions and General Requirements as well as, but not necessarily limited to, the following:

Section 02220 Trenching, Backfilling and Compacting

- C. Certain material may be provided by others to be installed under this contract. Coordinate with DNR Construction Inspector, utility company and other slated to provide material to be installed as part of this contract.

1.02 REFERENCES:

- A. Codes, Ordinances, and Standards: Comply with all applicable codes and regulations of the following:
 - 1. National Electric Code, latest edition;
 - 2. Local Utility Company Regulations;
 - 3. Underwriter's Laboratories.

1.03 SYSTEM DESCRIPTION:

- A. Power system shall be a 120/240 volt, 60 cycle, single phase 3-wire solid neutral, underground system.
 - 1. Ground circuits at the transformer/main distribution panel with a No.6 AWG continuous copper grounding conductor type THW routed with the circuit conductors.
- B. Verify the exact location of primary service, secondary service, and transformers at the job site.
- C. Underground Service Entrance: Unless otherwise specified elsewhere conductors will be continuous direct burial cable, USE or UF neoprene jacket insulated and moisture resistant non-metallic outer covering.
 - 1. Minimum burial depth 24 inches.
 - 2. Furnish and install number and size of conductors shown or as required by N.E.C.
 - a. All conductors shall be copper.

1.04 SUBMITTALS:

- A. Submit shop drawings, diagrams, and product information, material lists and manufacturer's specifications to Project Engineer before obtaining material, including but not necessarily limited to the following:
 - 1. Panelboards, power outlets, and equipment.
 - 2. Each specialized installation or system, including assembly or coordination Drawings.
- C. Product Data, Submit:
 - 1. Materials list of items proposed to be provided under this section;

2. Manufacturers' specifications and other data needed to prove compliance with the specified requirements;
 3. Manufacturers' recommended installation procedures which, when approved by the Project Engineer, will become the basis for accepting or rejecting actual installation procedures used on the work.
- D. Manual: Upon completion of this portion of the work, and as a condition of its acceptance, deliver to the Project Engineer two copies of an operation and maintenance manual, which shall include:
1. Copy of the approved Record Documents for this portion of the work;
 - a. Shop drawings, diagrams, material lists, and product information.
 - b. As-built drawings showing any changes in construction, additions and/or deletions from the Project Engineer's Drawings.
 2. Copies of all circuit directories;
 3. Copies of all warranties and guarantees.

1.05 QUALITY ASSURANCE:

- A. Qualification of Installers: For the actual fabrication, installation, and testing of the work in this section, use only thoroughly trained, licensed, experienced workers completely familiar with the items required and with the manufacturer recommended methods of installation.
1. In acceptance or rejection of installed work, no allowance will be made for lack of skill on part of workers.
- B. Provide only new materials of grade and quality specified. Unless otherwise approved or specified, provide only materials, equipment, devices, fittings, etc., of U.S. manufacture.
- C. Except as otherwise indicated, comply with the provisions of NEC and the standards by NEMA for electrical components.
1. Provide UL listed and labeled products where applicable.

1.06 DELIVERY, STORAGE, AND HANDLING:

- A. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the work and materials of all other trades.
- B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Project Engineer/DNR Construction Inspector and at no additional cost to the Owner.

1.07 SEQUENCING AND SCHEDULING:

- A. Coordination of Work: Plan all work so that it proceeds with a minimum of interference with the work of other trades.
 - 1. Coordinate all openings, special frames and sleeves required in the building construction for electrical work with the construction work of others both within and outside of this Contract.
- B. Cooperation with Other Trades: Coordinate the work to be performed in compliance with the requirements of other trades and afford other trades reasonable opportunity for the execution of their work.
 - 1. Coordinate this work shall with the work of other trades at such time and in such a manner as not to delay or interfere with their work.
 - 2. Examine the Contract Documents to determine the requirements of other similar trades.

1.08 WARRANTY:

- A. Guarantee the entire installation, including every part and every specialized system, to the exception of lamps, from the standpoint of workmanship and material for one year after formal acceptance by the Project Engineer.
- B. Correct any defects becoming apparent during the guarantee period at no cost to the Owner.
- C. Do not construe this guarantee requirements as obligating the Contractor to make repair or replacements for equipment failure as a result of improper operation or maintenance by the Owner.

1.09 MAINTENANCE STOCKS:

- A. Provide 5 percent excess over the required amount of spring-loaded nuts, washers, conduit clamps, and other specialized fasteners for mounting electrical equipment.
 - 1. Store where directed by the DNR Construction Inspector.
- B. Prior to the acceptance of the equipment with plug-in receptacles and ground fault interrupters, provide two GFI testers to be used by the DNR for testing and remain the property of the DNR thereafter.

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

- A. Subject to compliance with requirements, manufacturer offering electrical material and components which may be incorporated in the work include, but are not limited to, the following:
 - 1. Square D
 - 2. General Electric

3. ITE
4. Westinghouse
5. Hubbell
6. Bryant
7. Arrow-Hart

2.02 MATERIALS:

- A. Provide only materials that are new, of the type and quality specified.
 1. Where Underwriter's Laboratories, Inc. have established standards for such materials, provide only materials bearing the UL label.
- B. Provide only copper conductors as part of permanent installation within this project, from connection with the power company's equipment to connection to fixtures, receptacles or other devices or appliance as specified herein.
 1. The Project Engineer will not approve others for use anywhere within this project at any location.
 2. Remove any wire or cable used on this project which does not meet this requirement and replace at no cost to the Owner.
- C. Temporary Power:
 1. In addition to providing temporary power, provide and pay the costs for installing permanent electrical meter or meters as required;
 2. When permanent metering is in place and connected, the Owner will pay the costs for electrical power charged against the meter or meters.

2.03 COMPONENTS:

- A. Distribution Panels:
 1. Circuit breaker type with single main disconnect, solid neutral with voltage and main bus rating equal to or exceeding rating on panel schedule.
 2. Boxes: Code gauge steel, galvanized, with surface cover.
 3. Trim: Code gauge steel with grey enamel finish and door, complete with directory of circuits and key locked.
 4. Branch circuit breakers: Plug-in or bolt-in, of rating and poles indicated, with thermal-magnetic tripping mechanism at each pole, with quick-make and quick-break action, toggle type operating mechanism.
 - a. Provide multiple pole breakers with a common trip.
 - b. Provide breakers with ground fault protection for outlets as required by Code, except for outlets requiring ground fault interruption as indicated on the

Drawings for which separate and individual ground fault protection and reset features will be provided integral to the outlet.

5. Provide panels, for 200-Amp or less and 120/240 volt service, with amperage indicated, as manufactured by, but not limited to, one of the following:
 - a. Square D
 - b. General Electric
 - c. ITE
 - d. Westinghouse
6. Provide main distribution panels: For 225-Amp, 400-Amp, or 600-Amp, and 120/240 volt service, as shown on the Drawings, provide main distribution panels with solid neutral and equipment ground bar installed, dead-front enclosed board assembly, NEMA type 3R rain-proof cabinet with concealed door hinge, gasketed door, 3-point vault-type locking mechanism with chrome finish padlock handle, with rust inhibiting primer and a finish coat of standard grey baked enamel, as manufactured by, but not limited to one of the following:
 - a. Square D
 - b. General Electric
 - c. Others as approved by the Project Engineer
7. U.L. approved and N.E.C. rated.

B. Wiring Devices:

1. Receptacles: Specification grade, duplex, 3-pole grounding type, amperage as shown, 125 V AC as manufactured by, but not limited to, one of the following:
 - a. Hubbell
 - b. Bryant
 - c. Leviton

C. Fittings, Boxes, Etc.:

1. All outlet boxes, junction boxes, and switch boxes shall be code gauge galvanized steel.
2. Boxes shall be square, rectangular, or octagonal of a suitable and ample size.

D. Raceways and Fittings:

1. Conduit shall be rigid galvanized steel conduit with compression or tap-on type fittings.
2. Conduit installed in concrete slab or underground shall be rigid galvanized coated with asphaltum paint.
3. All conduit and fittings shall be U.L. approved and N.E.C. rated.
4. No conduit smaller than 3/4" shall be used.

5. Roadway conduit: Unless otherwise noted on the Drawings or elsewhere in the specifications, provide 2-1/2" diameter, schedule 80 PVC, UI listed at 90 degrees, UV resistant electrical conduit for the installation of conductors beneath roadways.
 6. Provide rigid galvanized steel electrical conduits, threaded at the top to accept rain-tight cap, for mounting of distribution of panels and equipment.
 - a. Rain-tight cap: galvanized steel, threaded fitting suitable for capping open end of rigid steel electrical conduit.
 7. Corrugated flexible PVC Conduit: Where direct burial cable is not used provide unspliced, high tensile pvc corrugated flexible conduit to IPS dimensions, suitable for underground secondary distribution and under roadway application for protection of type TW, THW, RHW, or XHHW conductors used underground.
 - a. Provide IPS dimensions, schedule 430 PVC accessories including, but not necessarily limited to, couplings, adaptors, end bells and plugs, and PVC solvent cement suited for watertight joints.
 - b. Provide Corrugate flexible PVC conduit and accessories manufactured by Carlon, Cleveland, Oh., or approved equals.
- E. Interior Conductors and Conductors Installed in Watertight Underground Conduits:
1. Wire and cable shall be 600 V insulated N.E.C. standard type TW, THW, RHW, or XHHW, and color coded.
 2. All wiring shall be copper and No.12 AWG or larger, wires No.8 and larger shall be stranded.
- F. Direct Burial Conductors:
1. Wire and Cable: 600 V insulated, NEC standard, type USE or UF, as shown on the Drawings
 2. All wiring shall be copper and No.12 AWG or larger, wires No.8 and larger shall be stranded.
- G. Grounding devices:
1. Grounding Electrodes: 5/8" diameter, minimum 10 feet long unless otherwise shown, "Copperweld" ground rods.
 2. Electrode Conductor: Copper, no.6 AWG or larger, and type THW. Use clamp suitable for burial to fasten grounding conductor to rod.
- H. Safety Switches:
1. Provide heavy duty, horsepower rated, quick-make and quick-break design, externally operated with provision for padlocking, fusible or non-fusible as shown on the Drawings.

- a. Equip with field or factory installed solid neutral assembly and service grounding kit.
2. Provide enclosure clearly marked for maximum voltage and horsepower rating, and:
 - a. Indoor: NEMA type 1.
 - b. Outdoor: NEMA type 3R, rain tight.
3. For dual rated switches, provide rating indicated on a metal plate riveted or otherwise permanently fastened to the enclosure.
4. Provide safety switches for 120/240 volt service, amperage as indicated as manufactured by, but not limited to one of the following:
 - a. Square D
 - b. General Electric
 - c. ITE
 - d. Westinghouse
5. Safety switches shall be UL approved and NEC rated.

I. Campsite Power Outlets:

1. The following are the only approved receptacle to be provided for recreational vehicle use on campsites:
 - a. 5-20R GFI, 20 AMP duplex, 125 volts, in accordance with ANSI/NEMA WD 6-1989, for recreational vehicles.
 - b. R-32-U, 30 AMP duplex, 125 volts, in accordance with ANSI/NEMA WD 6-1989, for recreational vehicles.
 - c. 14-50R, 50 AMP duplex, 125/250 volts in accordance with ANSI/NEMA WD 6-1989, for recreational vehicles.
2. Provide individual recreational vehicle site service entrance equipment, as shown on the Drawings, UI listed and labeled "Suitable for Recreational Vehicle Service Equipment", as manufactured by Midwest Electrical Products, Inc. P.O. Box 910, Mankato, Minnesota, Tel No. 507/625-4414, or approved equal.
3. Metallic R.V. Equipment: Unless otherwise noted on the Drawings, power outlets shall contain the circuit breaker and receptacles as specified herein.
 - a. Single unit Midwest Model No. U075CP6010, single unit Millbank Model No. U5200-XL-75 or approved equal for 50 Amp sites.
 - b. Double unit Midwest Model No. U075CB6010, double unit Millbank Model No. U5220-XL-75 or approved equal for 50 Amp sites.

- c. Provide NEMA 3R, light grey baked enamel, uni-post mounted power outlets, completely factory wired and assembled, with loop-feed lugs to accept specified wire size. Power outlet box to be 14-gauge galvanized steel. Post to be 12-Gauge galvanized steel.
 - d. Install stabilizer foot and post extension on pedestal as a footing base unless otherwise shown on the Drawings, or an alternate stabilization method is approved.
- 4. Nonmetallic R.V. Equipment: Injection Molded, thermoplastic enclosure with Corrosion resistant internal components, factory wired power receptacles in 20 and 30 AMP configuration, protected by a 30 AMP ground fault interrupter main breaker, a hinged cover to protect R.V. plugs. Midwest model No. U71 "Parkmate" or approved equal.
 - a. Terminal lugs will accept 1/0 copper cables.
 - b. The power center will be rated 100 AMP maximum, 120/240 volts, single phase, 3 wire with ground.
 - c. Power to be factory mounted on 12 gauge galvanized steel, grey baked on enamel, vented post for underground services, with loop-feed twin 2-300 MCM terminal per phase lugs.
 - d. Install stabilizer foot and post extension on pedestal as a footing base unless otherwise shown on the Drawings, or an alternate stabilization method is approved.
 - e. Provide a seven watt fluorescent light protected by an in-line fuse circuit protection and molded polycarbonate light cover.
 - f. Provide additional options as shown on the Drawings. Other options may include a light with manual switch or photo electric sensor, single service cable TV jack for type RG-59 coax cable, single service telephone jack type PH6596.
- J. Detectable Warning Tape: 3-inch wide electronically detectable tape with markings: "Caution - Electrical Power Lines Below" provided by, but not necessarily limited to, one of the following:
 - 1. Terra Tape D, Reef Industries, Inc., Houston, Texas
 - 2. Dectatape, Allen Systems, Houston, Texas
 - 3. Detectable Marking Tape III, Lineguard, Inc., Weaton, Illinois
- K. GFCI Testers: Provide GFCI testers capable of indicating wiring errors and faulty GFI equipment.
 - 1. Unitest GFI model No. 5708 manufactured by Beha Corporation, Clearwater, Fl. or approved equals.

- L. Mounting Channels and accessories: Provide 1-5/8" series, galvanized steel channels and accessories for mounting distribution panels, meters, and safety switches, including conduit clamps and spring-loaded nuts, provided by, but not necessarily limited to, one of the following:
 - 1. Unistrut, GTE Products Corp., Wayne, MI.
 - 2. Power-Strut, Elcen Metal Product Co., Franklin Park, IL.
- M. Terminal and Splice Boxes: NEMA type 3R rain proof code approved cabinets, with removable door with stay-open position, provision for padlocking, concentric knockouts, and heavy zinc-coated finish, of sufficient voltages.
 - 1. Include field or factory installed grounding kit.
 - 2. Provide boxes for 120/240 service, UL approved and NEC rated, of amperage indicated, as manufactured by, but not limited to, one of the following:
 - a. Square D
 - b. Midwest Electric Products, Inc.
- N. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Project Engineer.

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. Examine the areas and conditions under which the work of this section will be installed. Correct conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.
- B. Verify location and configuration of existing facilities in relation to the work of this section before preparing bid.
- C. Verify depths and location so all existing underground utilities

3.02 PREPARATION:

- A. Coordination: Coordinate installation of electrical items with the schedules for other work, to prevent unnecessary delays in the total work.
- B. Where electrical items are shown in conflict with locations of structural members and mechanical or other equipment, provide all required supports and wiring to clear the encroachment.
- C. Accuracy of Data: The data indicated on the Drawings and in these Specifications are as exact as could be secured, but their absolute accuracy is not guaranteed.

1. Exact locations, distances, levels, and other conditions will be governed by actual construction.
 2. Use the Drawings and these Specifications for guidance, and secure the DNR Construction Inspector's approval of all changes in locations.
- D. Measurements: Verify all measurements at the site.
1. No extra compensation will be made because of differences between locations shown on the Drawings and measurements at the site, except as provided In the General Covenants and Provisions.
- E. Circuiting: The branch circuits have been designed for maximum economy consistent with sizes for voltage drop and other considerations.
1. Circuits and wire sizes shall be in accordance with the N.E.C. Install circuits as shown on the Drawings unless otherwise approved by The Project Engineer.
- F. Electrical circuit drawings are diagrammatic in nature but are to be followed as closely as made possible by the actual construction and interface with the work of other trade in this or other contracts.
1. Where deviations are approved to conform with actual construction and the work of other trades, make such deviation without additional costs to the Owner, except as provided elsewhere in the Contract Documents.
- G. Trenching and backfilling is required for installation of the work of this section. Perform all such trenching and backfilling in strict accordance with the provisions of Section 02200 of these Specifications.

3.03 INSTALLATION:

A. Conduits:

1. Where conduit is installed in concrete slabs, on the ground, underground, or exposed to the weather, make all joints liquidtight and gastight.
 - a. Bury all underground conduit to a depth of 2'0" below finished grade unless otherwise shown on the Drawings.
 - b. Install necessary sleeves, chases, bushings, and approved sealants where conduits pass through slabs, floors, walls and other structures.
 - c. Make necessary openings and spaces while keeping cutting and patching of work by other to an acceptable minimum.
2. Install bushing at conduit ends, to protect wires from abrasions, where conduit enters box or other fittings.
3. No conduit smaller than 3/4" shall be used for a branch circuit in this project.

- a. Unless otherwise specified, provide code-size conduit for number and size of wire required by Code.
 4. Where conduit is exposed, run parallel to or at right angle with lines of the building.
 - a. Make bends free from dents and flattening with standard conduit elbows or conduit bent to not less than the same radius.
- B. Roadway Crossing Electrical conduit:
1. Install specified conduit at location indicated on the Drawings by boring, jacking into place, or trenching, when permitted by the DNR Construction Inspector, into unpaved roadways.
 2. Identify roadway crossing location by placing two 2" P-K nails, one inch apart, six inches from each side of pavement.
 - a. In addition install a 12-inch long reinforcing rod or a 24-inch long treated wood stake at each end of conduit.
 3. Plug and cap each end of conduit placed beneath roadway for future circuit installation.
 - a. Sand fill around each end to aid future location and installation.
 4. Install conduit for primary circuits below the location of conduit for primary circuit where they are indicated on the Drawings to cross at the same location.
- C. Installation of Conductors:
1. All conductors used for branch circuits will be minimum number 12 protected by 20 ampere circuit breakers.
 - a. Install larger wires where necessary to limit voltage drop or as required by NEC.
 2. Conductors will be installed continuous from outlet to outlet and no splices shall be made except within outlet or junction boxes.
 3. No underground splice will be permitted.
 - a. Conductors will run continuously from the main distribution panel to the terminal bar located in the first R.V. site service entrance equipment post on the circuit and continuously thereafter from terminal bar to terminal bar.
 4. Balance the campsite loads between the two phase conductors by connecting the loads to alternate sides of each 120/240 volt, three wire circuit.
 - a. Follow NEC requirements to provide for coding convention to consistently identify conductors throughout the project.
 3. No more than three circuits will be permitted in one raceway.

- a. A common neutral may be used as permitted by the National Electric Code.
- 4. Terminals and Splices: Stranded conductors shall be terminated with approved copper connecting lugs, accommodating the full diameter of the bare conductor.
 - a. Mains and feeders shall run their entire lengths in continuous sections without joints or splices.
- 5. Splices will be permitted only at outlet or junction boxes.
 - a. Splices shall be thoroughly cleaned, mechanically and electrically secured without solder, then soldered.
 - b. After soldering, wrap rubber and friction tape.
 - c. Vinyl plastic tape will be acceptable subject to the approval of local inspection authorities.
 - d. Scotch lock type S, M, L, and D connectors will be approved as equal to soldering.
- D. Installation of main distribution panels:
 - 1. Mount main distribution panels using specified conduit support posts and mounting channels, clamps and accessories as shown on the Drawings.
 - a. Install the rain-tight cap on top of support posts.
 - 2. Unless otherwise specified, install copper studs and spade type bushings in utility company transformer, and install secondary connections between transformer and the main distribution panel.
 - a. Seek approval of utility company representative prior, during and after installation.
 - 3. Install meter where indicated on The Drawings or as instructed by the utility company.
 - a. Installation subject to approval of utility company.
 - b. Provide utility company approved meter if so instructed by utility company.
 - 4. Directories: Mount a typewritten directory behind glass or plastic on the inside of each panel door.
 - a. Show circuit numbers and circuit description for all outlets in each circuit.
 - 5. Mounting Heights: To center of box above finished floor for the below-named items, shall be as follows, unless otherwise shown or indicated.
 - a. Flush toggle switches: 48".

- b. Convenience outlets and similar: 12" - finished areas (unless noted otherwise).
 - c. Convenience outlets and power outlets: 48".
 - d. Safety switches: 54" to operator.
 - e. Motor controllers: 54" or top even with safety switch.
 - f. Panelboards: 72" to top.
 - g. Other mounting heights are indicated on the Drawings by detail or by a plus dimension shown adjacent to the symbol.
- E. Grounding System: Ground all equipment including panelboards, transformers, conduits systems, junction and splice boxes, RV site service equipment, motors and other apparatus, by conduit or conductor to grounding electrode as shown on the Drawings, using grounding clamps suitable to direct burial.
- 1. Locate grounding electrode in area which will receive ground water regularly, and drive rod to depth of at least 8 feet.
 - 2. Test to measure ground resistance, and provide not more than 5 ohms resistance, adding ground rods as required to achieve that level.

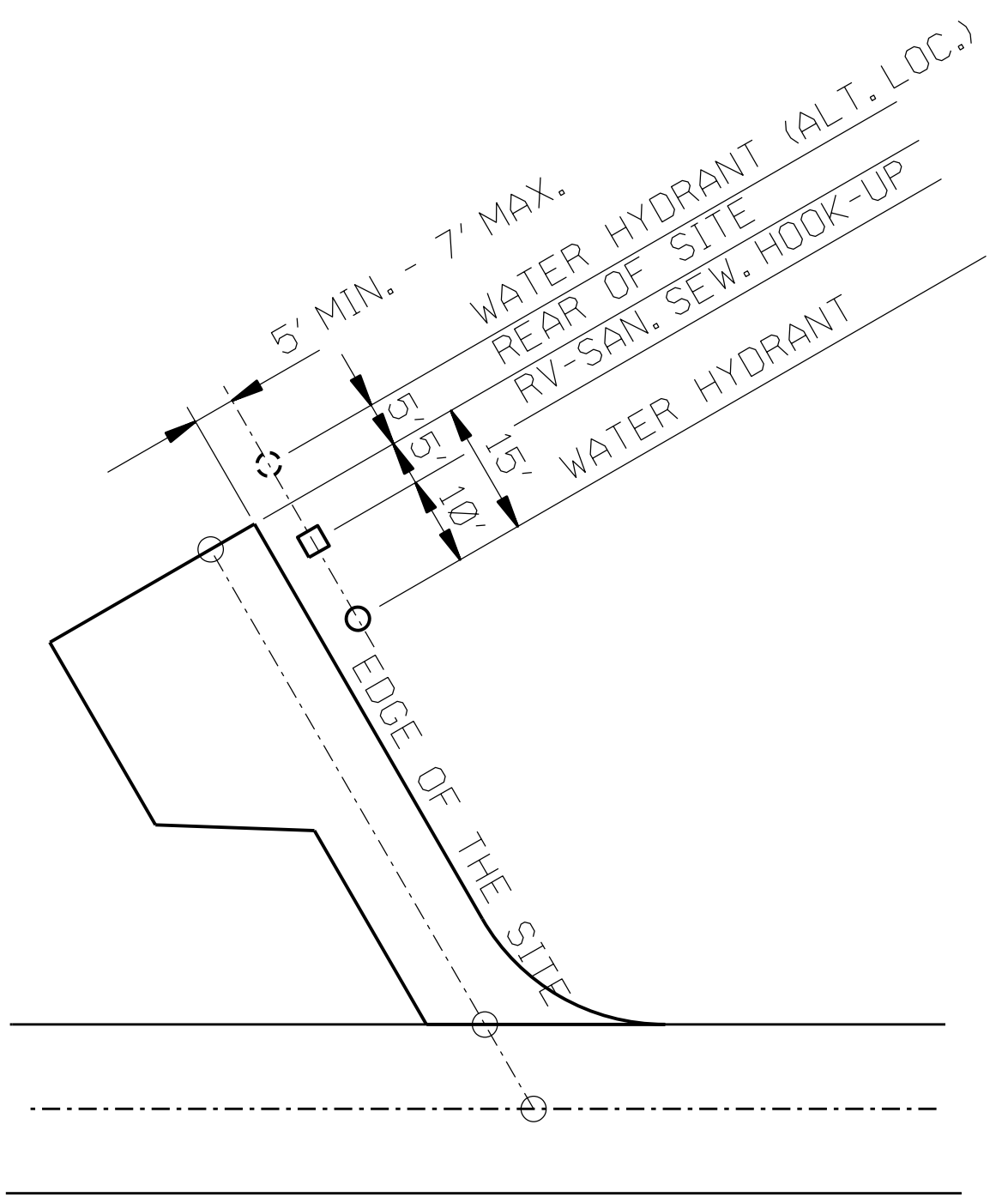
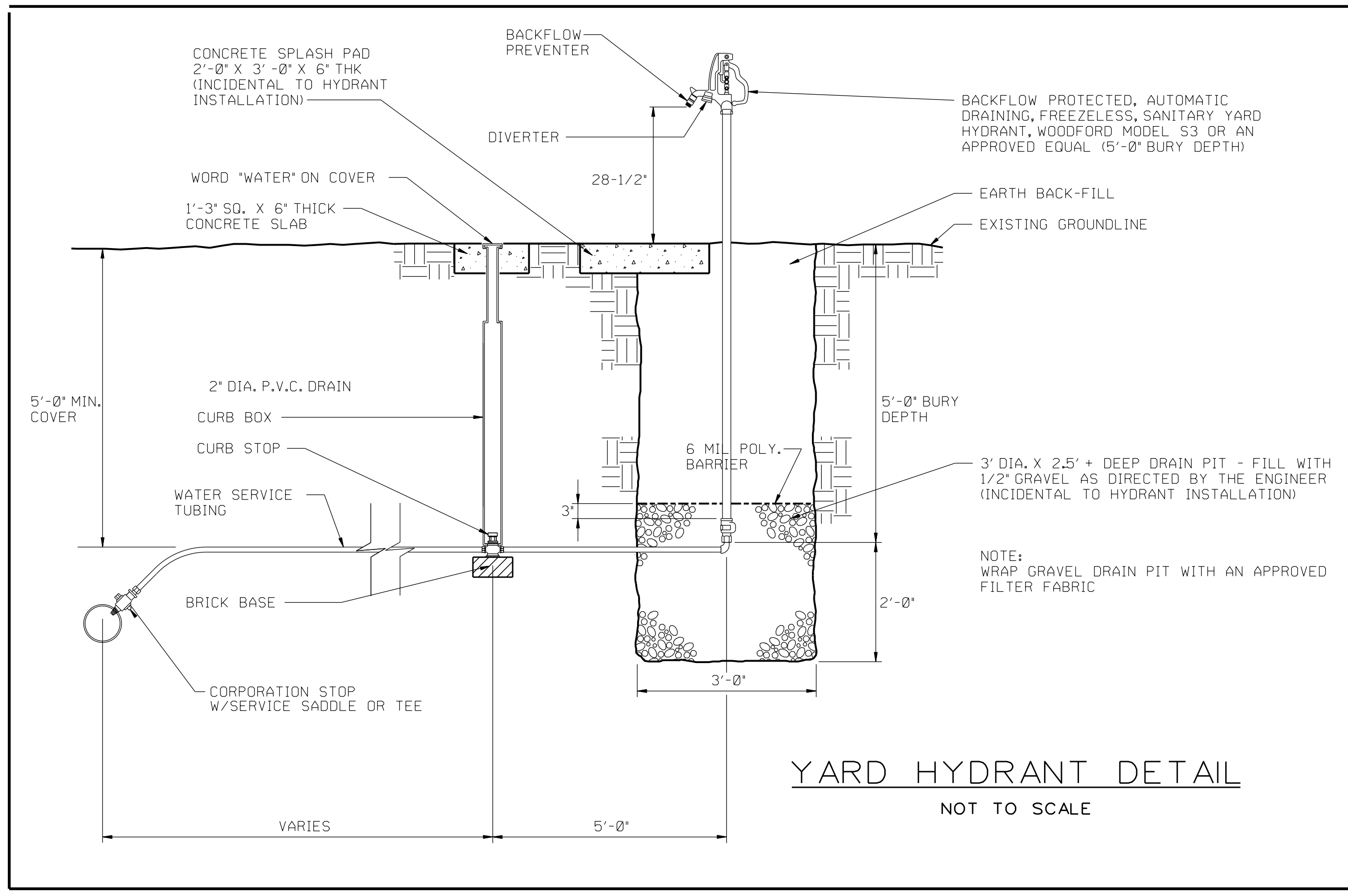
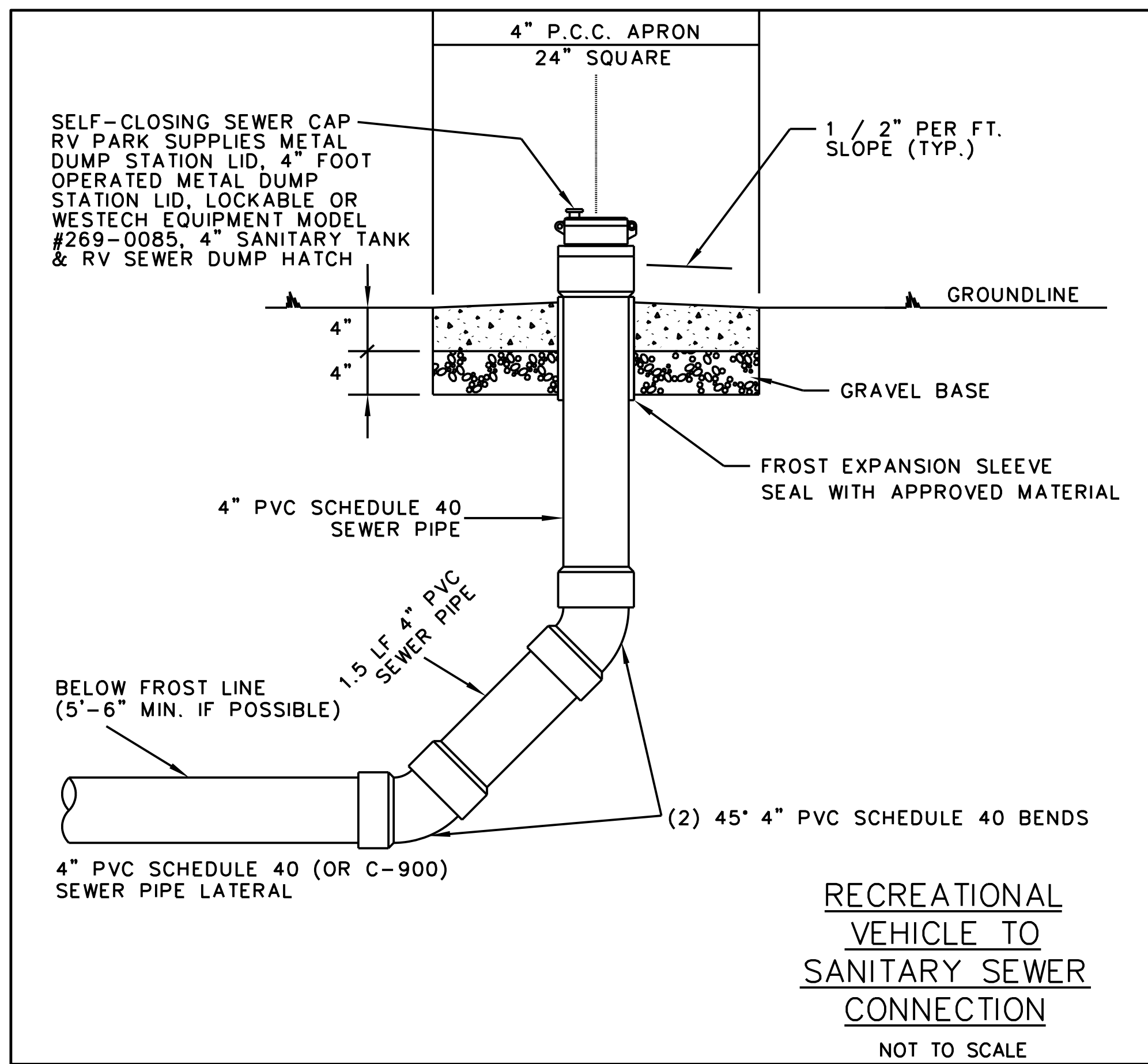
3.04 FIELD QUALITY CONTROL:

- A. Testing: At the conclusion of the work, test each and every circuit to establish the proper operation of electric equipment and freedom from improper ground and to ascertain the insulation values which shall not be lower than those required by the National Electrical Code.
 - 1. Test of equipment grounding conductors will show a resistance of no more than 25 ohms at any point on the circuit, except for grounding electrode which will show a resistance of no more than 5 ohms.
- B. Carry out final test in the presence of the Project Engineer/DNR Construction Inspector.
- C. Correct all work not meeting code requirements, and all circuits which fail testing, at no additional cost to the Owner.

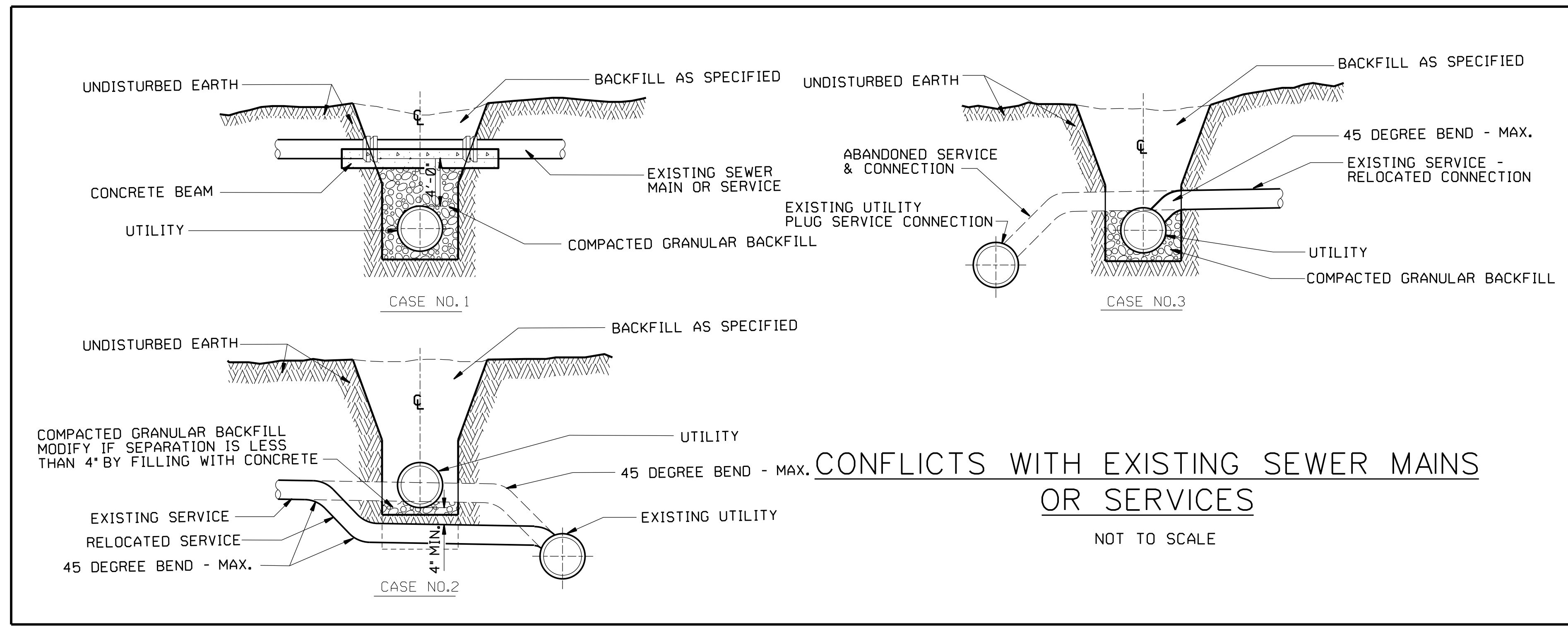
3.05 CLEANING:

- A. Exposed conduits, panel boards, fixtures, switches, hangers, and equipment exposed shall be thoroughly cleaned.
- B. Fixture glass and shields shall be cleaned and washed.
- C. Keep premises free from unnecessary accumulation of rubbish and debris resulting from the work of this section.
- D. Dispose of all debris resulting from the work of this contract at no additional cost to the Owner.

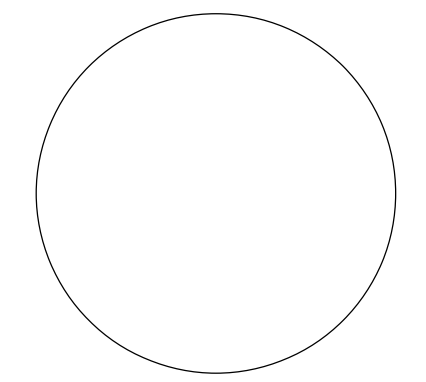
END OF SECTION 02785



SINGLE BACK-IN SITE
UTILITY LOCATIONS
NOT TO SCALE

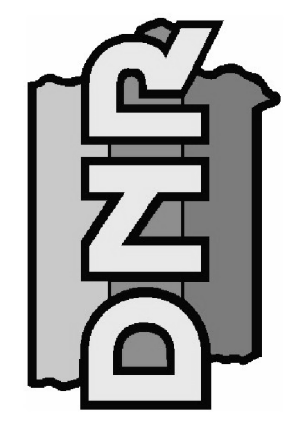


CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



SEWER & WATER DETAILS

CAMPGROUND RENOVATION AND ENTRANCE PORTAL FOR:
LEDGES STATE PARK

BOONE COUNTY

NO.	BY	REVISION
1	DDG	RV CONNECTION DETAIL

DRAWN BY: PROJECT NUMBER:
17-02-08-02

CHK'D BY: DATE:

SHEET No:

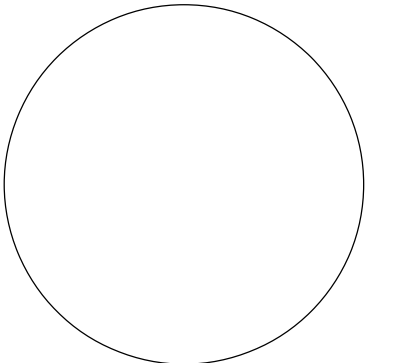
ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	MOBILIZATION	L.S.	1
2	TREE REMOVAL	L.S.	1
3	CLEARING AND GRUBBING	L.S.	1
4	EXCAVATION CLASS 10, 6" CAMP PAD CORE OUT	C.Y.	1,556
5	MACADAM STONE, 4" DEPTH	TONS	1,802
6	3/8 MINUS CRUSHED STONE, 2" DEPTH	TONS	1,000
7	ENGINEERING FABRIC	S.Y.	9,338
8	NPDES GENERAL PERMIT #2 & SWPPP	L.S.	1
9	2" PVC SDR 21 WATER LINE	L.F.	1,187
10	1" HDPE WATER LINE	L.F.	350
11	2 1/2" FLUSHING HYDRANT	EA.	3
12	YARD HYDRANT	EA.	15
13	DETECTABLE WARNING TAPE, 3" WATER	L.F.	1,537
14	6" X 6" X 4" PVC WYES	EA.	23
15	CURB STOP/VALVE BOX	EA.	15
16	CORPORATION STOP	EA.	15
17	4" X 2" TEES	EA.	2
18	SYSTEM DISINFECTION	L.S.	1
19	6" SDR 35 PVC SEWER PIPE	L.F.	980
20	4" SDR 35 PVC SEWER PIPE	L.F.	570
21	DETECTABLE WARNING TAPE, 3" SEWER	L.F.	1,904
22	2" SDR 11 HDPE SEWER PIPE	L.F.	354
23	DUPLEX GRINDER PUMP STATION WITH CONTROL AND ALARM PANEL, COMPLETE	L.S.	1
24	SANITARY SEWER CLEANOUT ASSEMBLY	EA.	12
25	RV SEWER CLEANOUT ASSEMBLY	EA.	15
26	MANHOLE, COMPLETE	L.S.	1
27	EXCAVATION CLASS 10, 12" CORE OUT	C.Y.	504
28	SPECIAL BACKFILL, 6" DEPTH	C.Y.	476
29	HOT MIX ASPHALT STANDARD TRAFFIC, 2" BASE COURSE, 3/4 IN. MIX	TONS	168
30	HOT MIX ASPHALT STANDARD TRAFFIC, 2" INTERMEDIATE COURSE, 3/4 IN. MIX	TONS	168
31	HOT MIX ASPHALT STANDARD TRAFFIC, 2" SURFACE COURSE, 1/2 IN. MIX	TONS	168
32	ASPHALT BINDER, PG 58-28S	TONS	51
33	ROAD WIDENING	L.S.	1
34	PAD MOUNTED 800 AMP DISTRIBUTION PANEL AND CT CABINET & CONNECTIONS COMPLETE	EA.	1
35	PAD MOUNTED 600 AMP DISTRIBUTION PANEL AND CT CABINET & CONNECTIONS COMPLETE	EA.	2
36	PAD MOUNTED 400 AMP DISTRIBUTION PANEL AND CT CABINET & CONNECTIONS COMPLETE	EA.	2
37	SINGLE CAMPSITE OUTLET POST - 50 AMP	EA.	68
38	DOUBLE CAMPSITE OUTLET POST - 50 AMP	EA.	2
39	NO. 8 AWG GROUNDING CONDUCTOR CABLE, TYPE THW OR USE	L.F.	255
40	NO. 6 AWG GROUNDING CONDUCTOR CABLE, TYPE THW OR USE	L.F.	820
41	NO. 4 AWG GROUNDING CONDUCTOR CABLE, TYPE THW OR USE	L.F.	472
42	NO. 2 AWG GROUNDING CONDUCTOR CABLE, TYPE THW OR USE	L.F.	5,157
43	NO. 4 AWG SINGLE CONDUCTOR CABLE, TYPE USE	L.F.	765
44	NO. 1/0 AWG SINGLE CONDUCTOR CABLE, TYPE USE	L.F.	2,460
45	NO. 2/0 AWG SINGLE CONDUCTOR CABLE, TYPE USE	L.F.	210
46	NO. 4/0 AWG SINGLE CONDUCTOR CABLE, TYPE USE	L.F.	9,349
47	NO. 250 MCM SINGLE CONDUCTOR CABLE, TYPE USE	L.F.	1,188
48	NO. 300 MCM SINGLE CONDUCTOR CABLE, TYPE USE	L.F.	2,475
49	NO. 350 MCM SINGLE CONDUCTOR CABLE, TYPE USE	L.F.	2,757
50	ROADWAY CROSSING CONDUIT - SCHEDULE 80 PVC	L.F.	164
51	DETECTABLE WARNING TAPE, 3" ELECTRIC	L.F.	5,447
52	TRENCH, SINGLE CIRCUIT SECONDARY	L.F.	5,528
53	REMOVE AND DISPOSE OF LOW LEVEL LIGHTING BOLLARDS	EA.	12
54	REPLACE HPS LIGHTS W/LED FIXTURES	EA.	5
55	ENTRANCE PORTAL, COMPLETE	L.S.	1
56	SEEDING, FERTILIZING AND MULCHING	L.S.	1
57	6" NON-PERFORATED PE TUBING	L.F.	700
58	6X6X6 PE TEES	EA.	4
59	6" X 5' STEEL RISER W/TRASH GUARD	EA.	4
60	6" CMP WITH ANIMAL GUARDS	L.F.	20

ESTIMATE REFERENCE INFORMATION

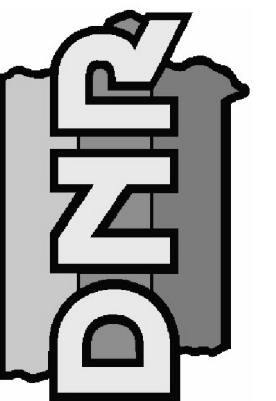
ITEM NO.	DESCRIPTION
2	A. CONTRACTOR SHALL REMOVE TREES BEFORE MARCH 31, 2018 AS DIRECTED BY DNR ENGINEER. TREES & BRUSH MAY BURNED ON SITE UNDER AN AGREED UPON LOCATION.
3	A. CONTRACTOR SHALL CLEAR AND GRUB AREAS AS DIRECTED BY DNR ENGINEER.
4	A. CONTRACTOR SHALL CORE OUT CAMP PADS AS DIRECTED BY DNR ENGINEER.
8	A. CONTRACTOR SHALL OBTAIN THE NECESSARY NPDES GENERAL PERMIT #2 AS GREATER THAN 1 ACRE IS BEING DISTURBED WITH THIS PROJECT AND TO PREPARE A SWPPP IN ACCORDANCE WITH PERMIT #2. CONTRACTOR IS RESPONSIBLE FOR SUPPLYING INSPECTIONS & RECORD KEEPING.
12	A. SEE PAGE B.08 FOR YARD HYDRANT DETAILS.
23	A. CONTRACTOR SHALL FURNISH AND INSTALL & TEST DUPLEX GRINDER PUMP STATION. B. DUPLEX GRINDER PUMP STATION SHALL BE E/ONE DH272-129 WITH E/ONE DUPLEX SENTRY PROTECT PLUS PANEL OR EQUIVALENT.
24	A. SEE PAGE B.05 FOR SANITARY SEWER CLEANOUT DETAILS.
25	A. SEE PAGE B.08 FOR RV SEWER CLEANOUT DETAILS.
26	A. SEE PAGE B.06 AND B.07 FOR MANHOLE AND LID DETAILS.
29	A. HMA BINDER CONTENT SHALL BE 6%.
30	A. HMA BINDER CONTENT SHALL BE 6%.
31	A. HMA BINDER CONTENT SHALL BE 6%.
33	A. SEE PAGE D.11
53	A. CONTRACTOR SHALL REMOVE AND DISPOSE OF LOW LEVEL LIGHTING BOLLARDS AND FOOTINGS AS DIRECTED BY DNR ENGINEER.
54	A. REPLACE HIGH PRESSURE SODIUM LIGHTS WITH BEACON LIGHTING - VIPER S LED SITE LIGHTS (VPS-48NB-110-4K-T4-UNV-PCR-TL-RA-DBT) OR EQUIVALENT.
55	A. SEE PAGES K.01 - K.05
56	A. CONTRACTOR SHALL SEED, FERTILIZE AND MULCH AREAS DISTURBED BY CONSTRUCTION.
57	A. NON-PERFORATED TUBING TO BE PLACED TO DRAIN LOW AREAS AS DIRECTED BY DNR ENGINEER.
59	A. STEEL RISER INTAKES TO BE SUPPLIED WITH STAINLESS STEEL TRASH GUARDS AND 24 HOLE PER FOOT AND PLACED AS DIRECTED BY DNR ENGINEER. B. ANY OTHER FITTINGS OR ADAPTERS FOR DRAINAGE WILL BE INCIDENTAL.
60	A. 10' LENGTHS OF 6" CMP TO BE SUPPLIED WITH ANIMAL GUARDS AND USED FOR DRAINAGE OUTLETS - PLACE AS DIRECTED BY DNR ENGINEER.

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



QUANTITIES AND GENERAL INFORMATION

CAMPGROUND RENOVATION AND ENTRANCE PORTAL FOR:

LEDGES STATE PARK

BOONE COUNTY

NO.	DATE	BY	REVISION
1	10/11/2017	JDC	BID ITEMS & INFO
DRAWN BY:		PROJECT NUMBER:	
CHK'D BY:		DATE:	
SHEET No:			

C.01

GENERAL NOTES

The contractor shall notify the following two weeks prior to construction:

1. District Inspector
Don Labate
(515)250-3714
2. Project Manager
Troy Duff
(515)250-3715

Verify actual locations and elevations with DNR Engineer.

All work shall conform to and be performed in accordance with all applicable codes and ordinances.

The contractor shall visit the site and inspect the project area and thoroughly familiarize themselves with the actual job conditions prior to bidding and the start of work. Failure to visit the project site shall not relieve the contractor from performing the work in accordance to the plans, specification, special provisions and contract.

The contractor shall verify, at the site, all dimensions and conditions shown on the plans and shall notify the DNR Engineer of any discrepancies, omissions, and/or conflicts prior to proceeding with the work.

It shall be the contractor's responsibility to provide waste areas or disposal sites for excess material (excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this project. No payment for overhaul will be allowed for material hauled to these sites. No material shall be placed within the right-of-way, unless specifically stated in the plans or approved by the DNR Engineer.

The contractor shall not disturb desirable grass areas and desirable trees outside the construction limits. The contractor will not be permitted to park or service vehicles and equipment or use these areas for storage of materials. Storage, parking and service areas will be subject to the approval of the DNR Engineer.

Where utilities and fixtures are shown as Existing on the plans or encountered within the construction area, it shall be the responsibility of the contractor to notify the DNR Engineer of those utilities prior to the beginning of any construction. The contractor shall be afforded access to these facilities for necessary modification of services. Underground facilities, structures and utilities have been plotted from available surveys and records and therefore their locations must be considered approximate only. It is possible there may be others, the existence of which is presently not known or shown. It is the contractor's responsibility to determine their existence and exact location and to avoid damage thereto. No claims for additional compensation will be allowed to the contractor for any interference or delay caused by such work.

The contractor shall shape graded area to maintain surface drainage. All elevations are to finish grade.

The contractor is expected to have materials, equipment, and labor available on a daily basis to install and maintain erosion control features on the project. This may involve seeding, silt fence, rock ditch checks, silt basins or silt dikes.

Sheet C.03 shows approximate locations of existing utilities.

The contractor shall remove trees necessary to widen the entrance road, construct the outer loop road and construct camp pads. Tree removal shall be completed by March 31, 2018. Trees to be disposed of as directed by DNR Engineer.

Camp pad construction will consist of coring out material at pad location, preparing subgrade, placing engineering fabric, 4" of macadam stone, and 2" of 3/8" minus crushed stone surfacing. The excavated material will be used to fill low areas and feather around camp pads, if suitable and as directed by DNR Engineer.

GENERAL NOTES

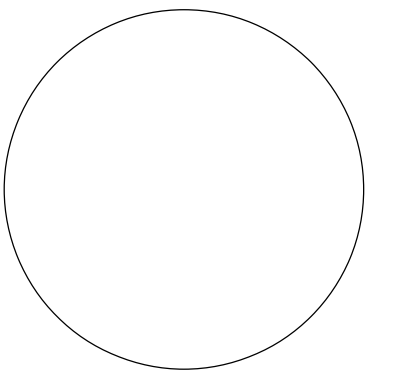
Some camp pads may need to be adjusted in length or alignment to avoid trees or other features. There are several existing camp pads that will only need a small amount of surfacing material and will be identified during construction by the DNR Engineer.

The contractor shall remove the low level lighting bollards as directed by the DNR Engineer. These will become property of the contractor and be hauled off-site.

The high pressure sodium light fixtures being replaced with LED fixtures will become property of the contractor.

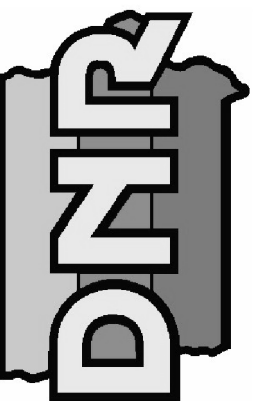
The Contractor shall obliterate and remove a portion of the existing road for construction of the outer loop road. There is approximately 263 S.Y. of pavement to be removed. Material excavated for the roadway may be used if suitable. This will be incidental to other bid items.

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



GENERAL NOTES

CAMPGROUND RENOVATION AND ENTRANCE PORTAL FOR:

LEDGES STATE PARK

BOONE COUNTY

NO.	BY	REVISION
1	TDD	NOTES

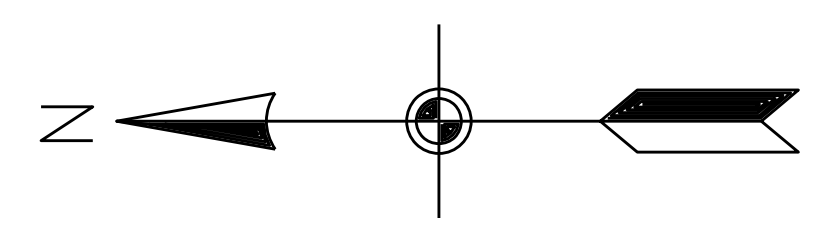
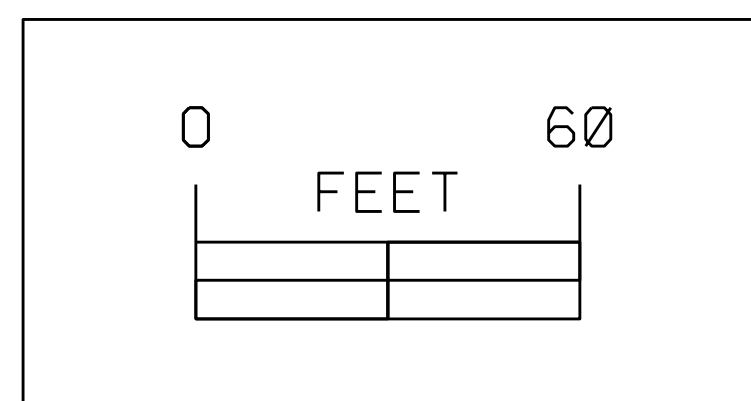
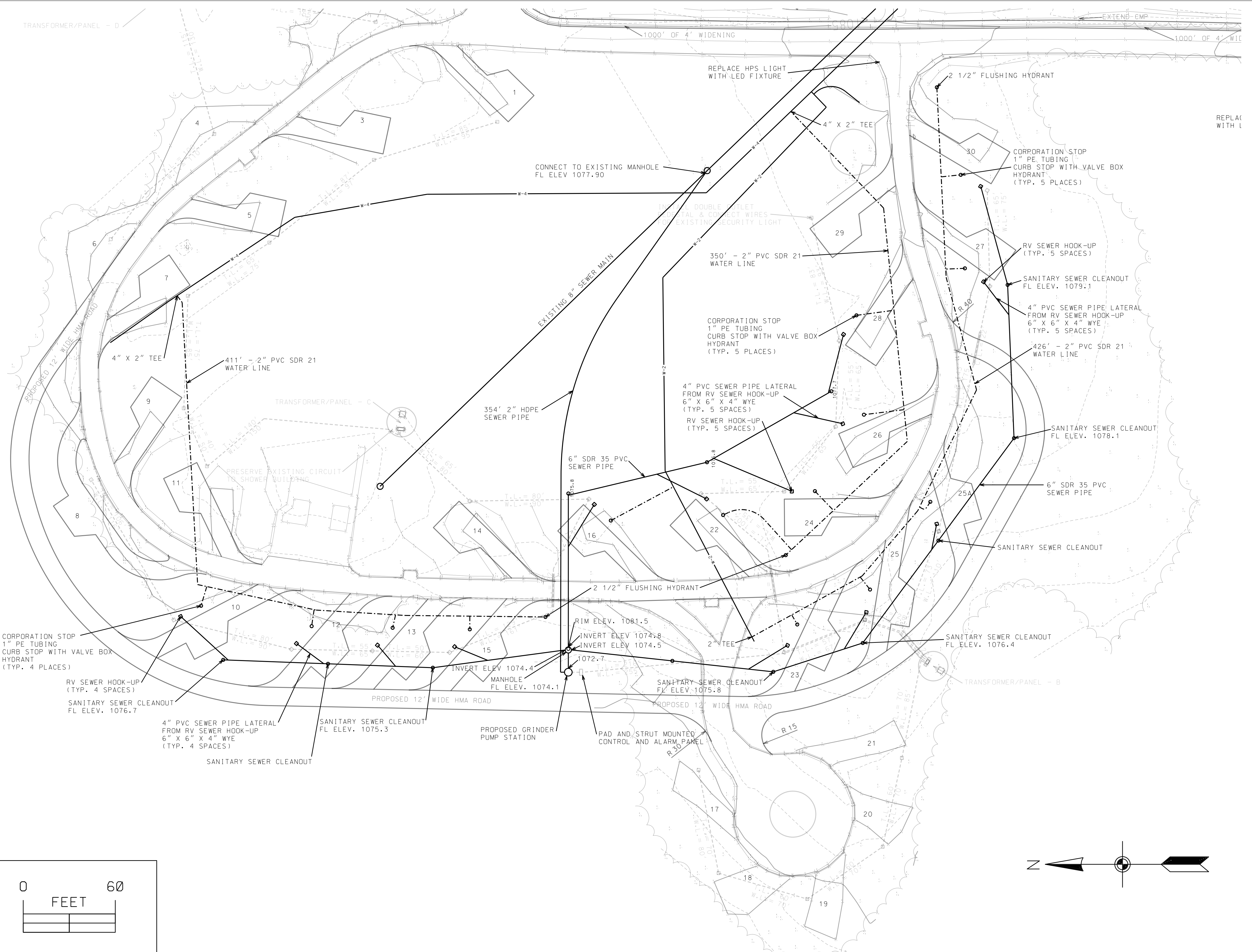
DRAWN BY: PROJECT NUMBER:
17-02-08-02

CHK'D BY: DATE:

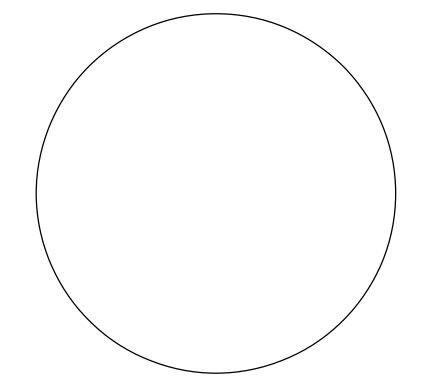
SHEET No:

C.02

TRANSFORMER/PANEL - 0

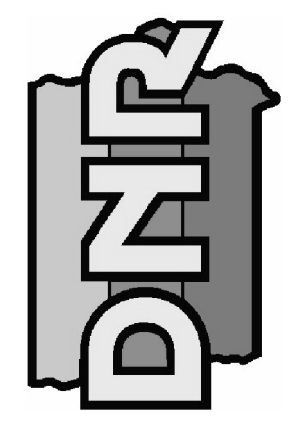


CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



WEST LOOP SEWER & WATER

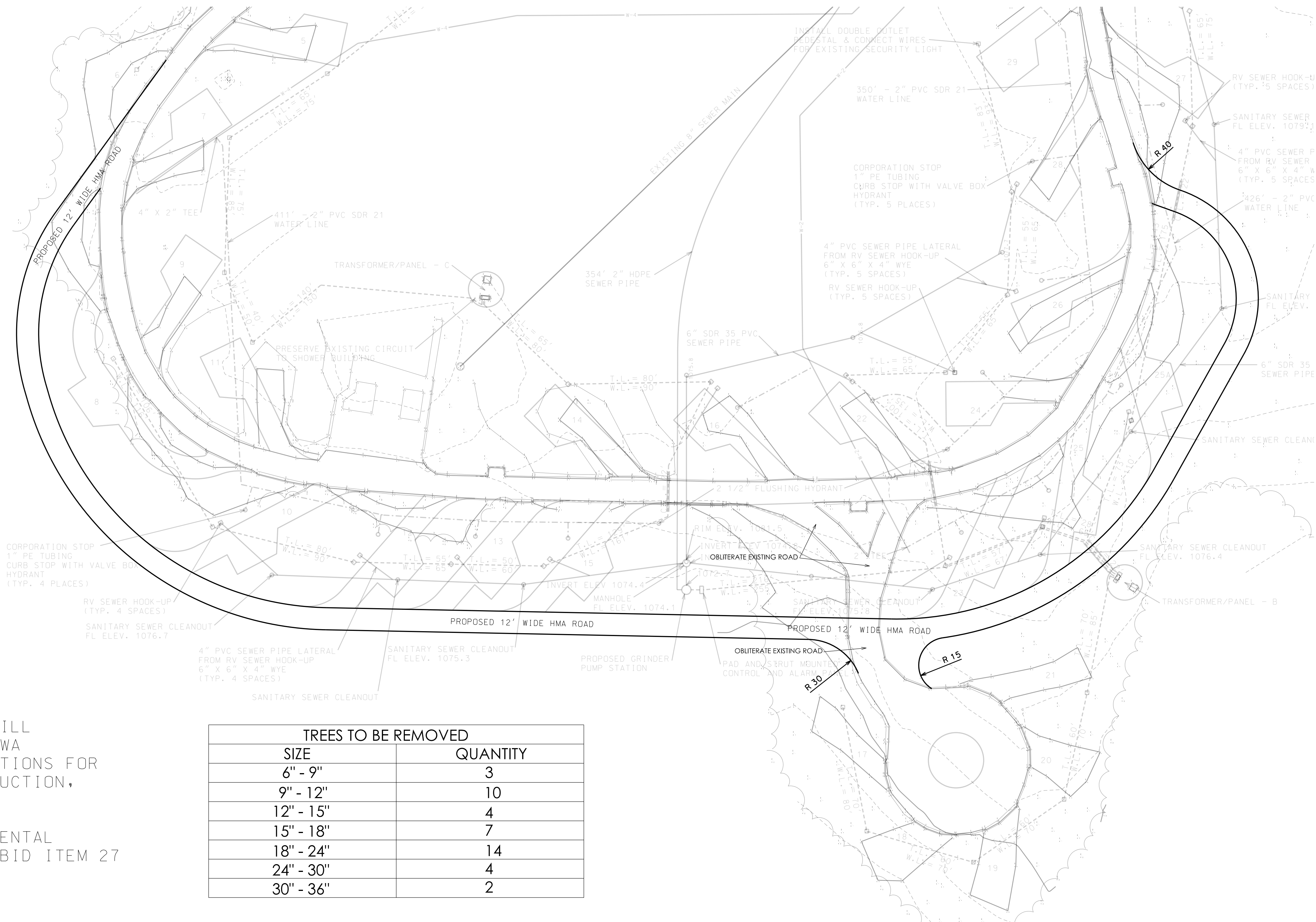
CAMPGROUND RENOVATION AND ENTRANCE PORTAL FOR:
LEDGES STATE PARK

BOONE COUNTY

NO.	DATE	REVISION
1	T1/2017	SEWER LINE DIM

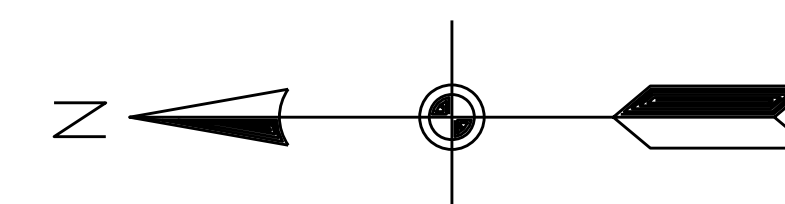
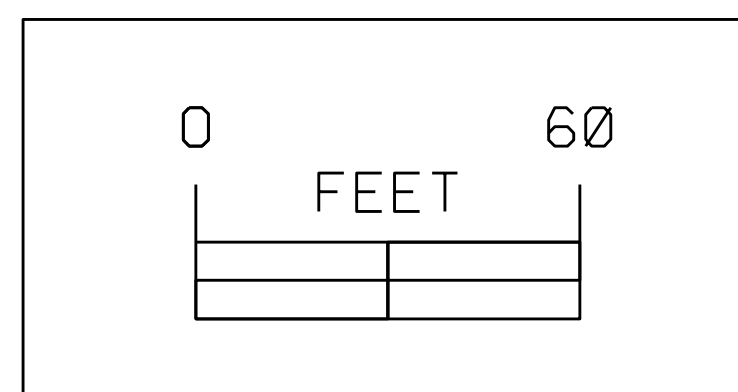
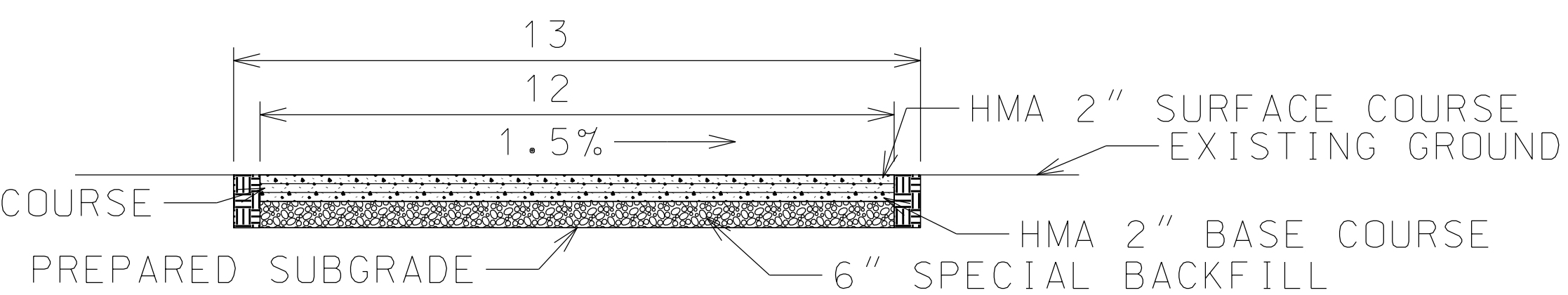
DRAWN BY: PROJECT NUMBER:
CHK'D BY: DATE:
17-02-08-02

SHEET No:
D.08

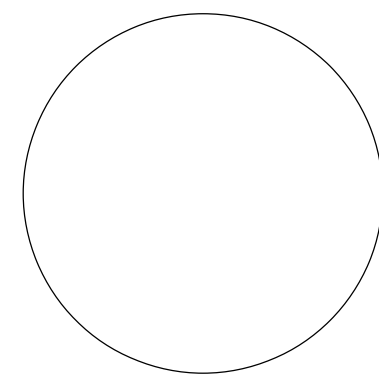


- NOTES:
- CONSTRUCTION FOR ROAD WILL BE AS SPECIFIED IN THE IOWA D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SECTION 2303.
 - GRADING SHALL BE INCIDENTAL TO EXCAVATION CLASS 10 - BID ITEM 27

TREES TO BE REMOVED	
SIZE	QUANTITY
6" - 9"	3
9" - 12"	10
12" - 15"	4
15" - 18"	7
18" - 24"	14
24" - 30"	4
30" - 36"	2



CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



PROPOSED OUTER LOOP ROAD

CAMPGROUND RENOVATION AND ENTRANCE PORTAL FOR:
LEDGES STATE PARK

BOONE COUNTY

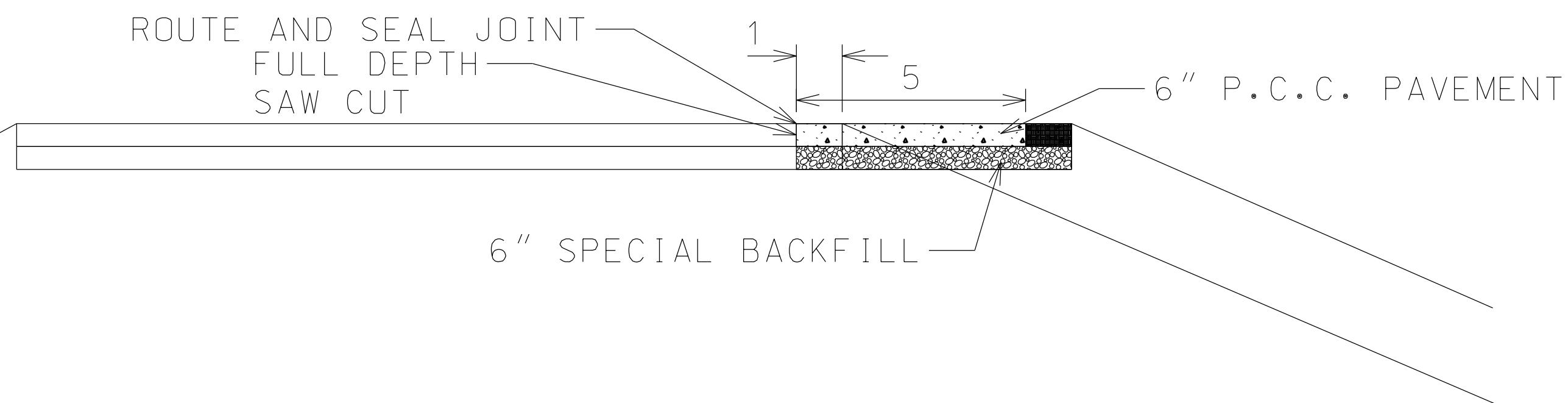
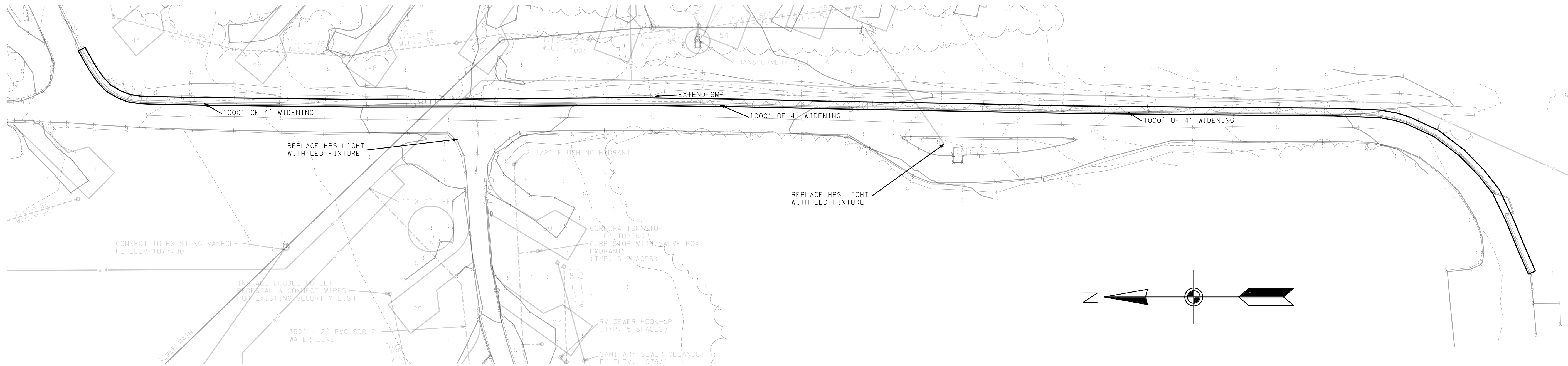
NO.	DATE	REVISION
1	TDD 11/2017	NOTES

DRAWN BY: PROJECT NUMBER:
17-02-08-02

CHK'D BY: DATE:

SHEET No:

D.10



NOTES:

1. CONSTRUCTION FOR ROAD WIDENING WILL BE AS SPECIFIED IN THE IOWA D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SECTION 2302.

1. CONTRACTOR WILL PROVIDE FULL DEPTH LONGITUDINAL SAW CUT TO REMOVE THE EASTERN 1' OF PAVEMENT FOR 1000'.

3. CONTRACTOR SHALL EXTEND 18" CORRUGATED METAL PIPE 4' TO ACCOMMODATE THE ROAD WIDENING.

4. APPROXIMATE QUANTITIES FOR MATERIALS ARE: 567 SY P.C.C., 214 TONS SPECIAL BACKFILL.

5. CLEARING LIMITS WILL BE 12' EAST OF EXISTING EAST EDGE OF PAVEMENT.

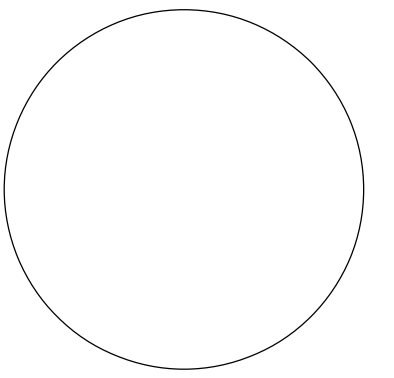
6. CONTRACTOR WILL BE RESPONSIBLE FOR GRADING AND RE-ALIGNMENT OF 'V' DITCH AS DIRECTED BY DNR ENGINEER.

7. EXCAVATED MATERIAL FROM CAMP PADS OR OUTER LOOP ROAD MAY BE USED FOR FILL IF SUITABLE.

NOT TO SCALE

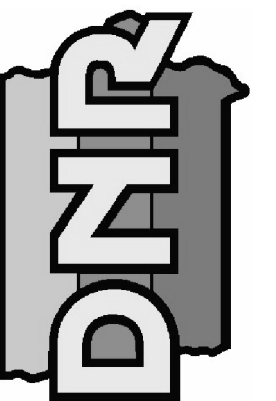
TREES TO BE REMOVED	
SIZE	QUANTITY
< 6"	13
6" - 9"	7
9" - 12"	13
12" - 15"	2
15" - 18"	4
18" - 24"	4
24" - 30"	1
30" - 36"	1

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



PROPOSED ROAD WIDENING

CAMPGROUND RENOVATION AND ENTRANCE PORTAL FOR:

LEDGES STATE PARK

BOONE COUNTY

NO.	DATE	BY	REVISION
1	TJ/2017	TDD	NOTES

DRAWN BY: PROJECT NUMBER:
17-02-08-02

CHK'D BY: DATE:

SHEET No:

D.11