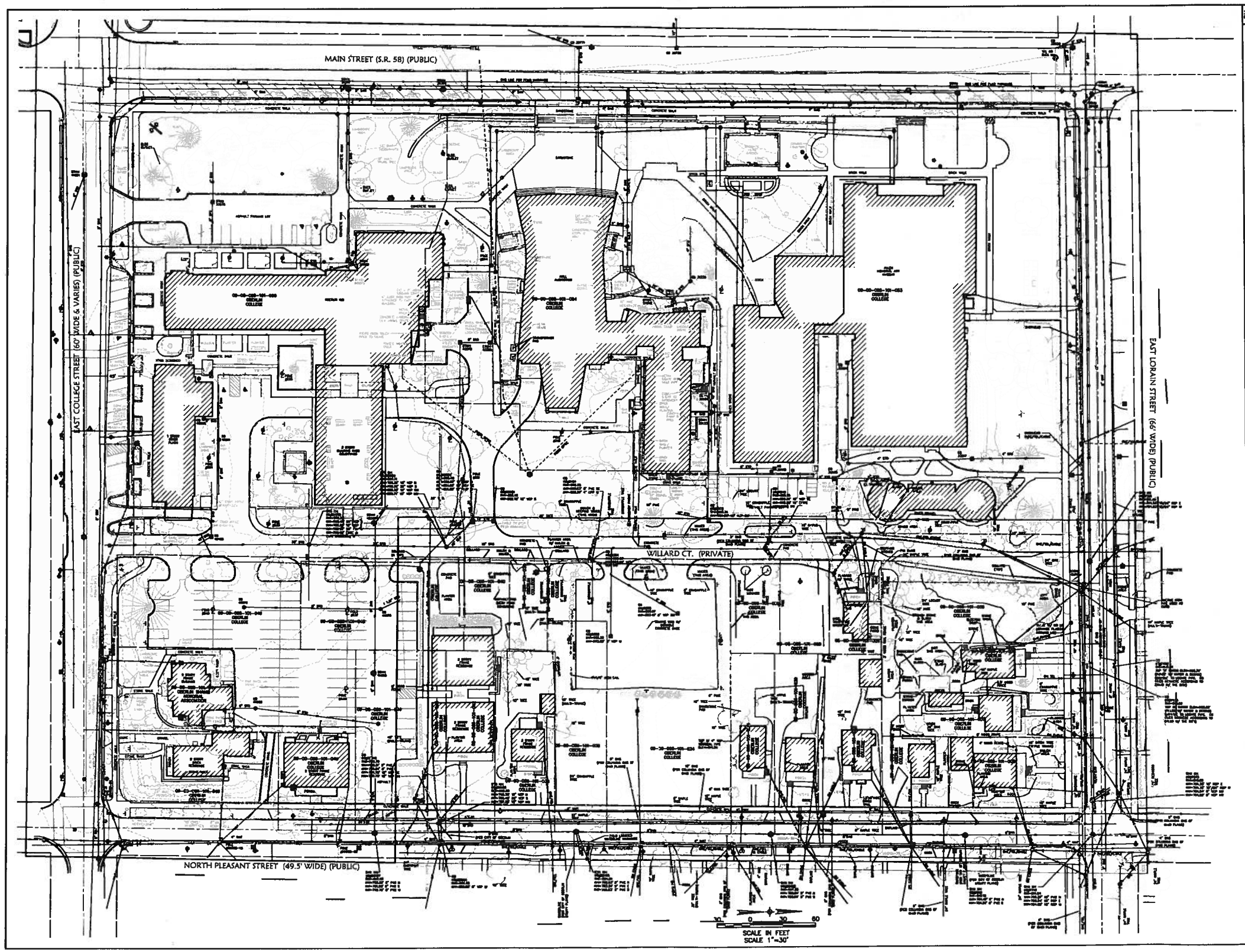

REVISIONS			
NO.	DATE	DESCRIPTION	BY

KS ASSOCIATES

KS Associates, Inc.
260 Burns Road, Suite 100
Elyria, OH 44035
P 440.365.4730
F 440.365.4790
www.ksassociates.com

BOUNDARY AND TOPOGRAPHIC SURVEY
PART OF RUSSIA TOWNSHIP ORIGINAL LOT NO. 86
AND PART OF ORIGINAL PLATS OF OBERLIN AS
RECORDED IN VOL. 1 P. 18 AND VOL. 5 P. 30
CITY OF OBERLIN, COUNTY OF LORAIN, STATE OF OHIO

SHEET 2 OF 3

JOB NO. 06043-08

NOTES:
1. BOUNDARY SURVEY PERFORMED BY KS ASSOC. INC. AND PROVIDED TO NEFF & ASSOCIATES BY OWNER.
2. UTILITY LOCATIONS HAVE BEEN PROVIDED TO NEFF & ASSOCIATES BY THE OWNER AND SHALL BE VERIFIED IN FIELD PRIOR TO CONSTRUCTION.

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Architecture Planning Interior Design

NEFF & ASSOCIATES

RECEIVED
JUN 26 2014
PLANNING DEPT.

CONTRACT DOCUMENT
PROGRESS SET
03.31.14

NO.	DATE	DESCRIPTION
	02.28.2014	PLANNING COMMISSION SUBMITTAL
	05.08.2013	PLANNING COMMISSION SUBMITTAL
	07.17.2013	ISSUED FOR SITE PLAN REVIEW
	09.07.2013	ISSUED FOR 100% DD

OBERLIN COLLEGE GATEWAY BUILDING

Oberlin, Ohio

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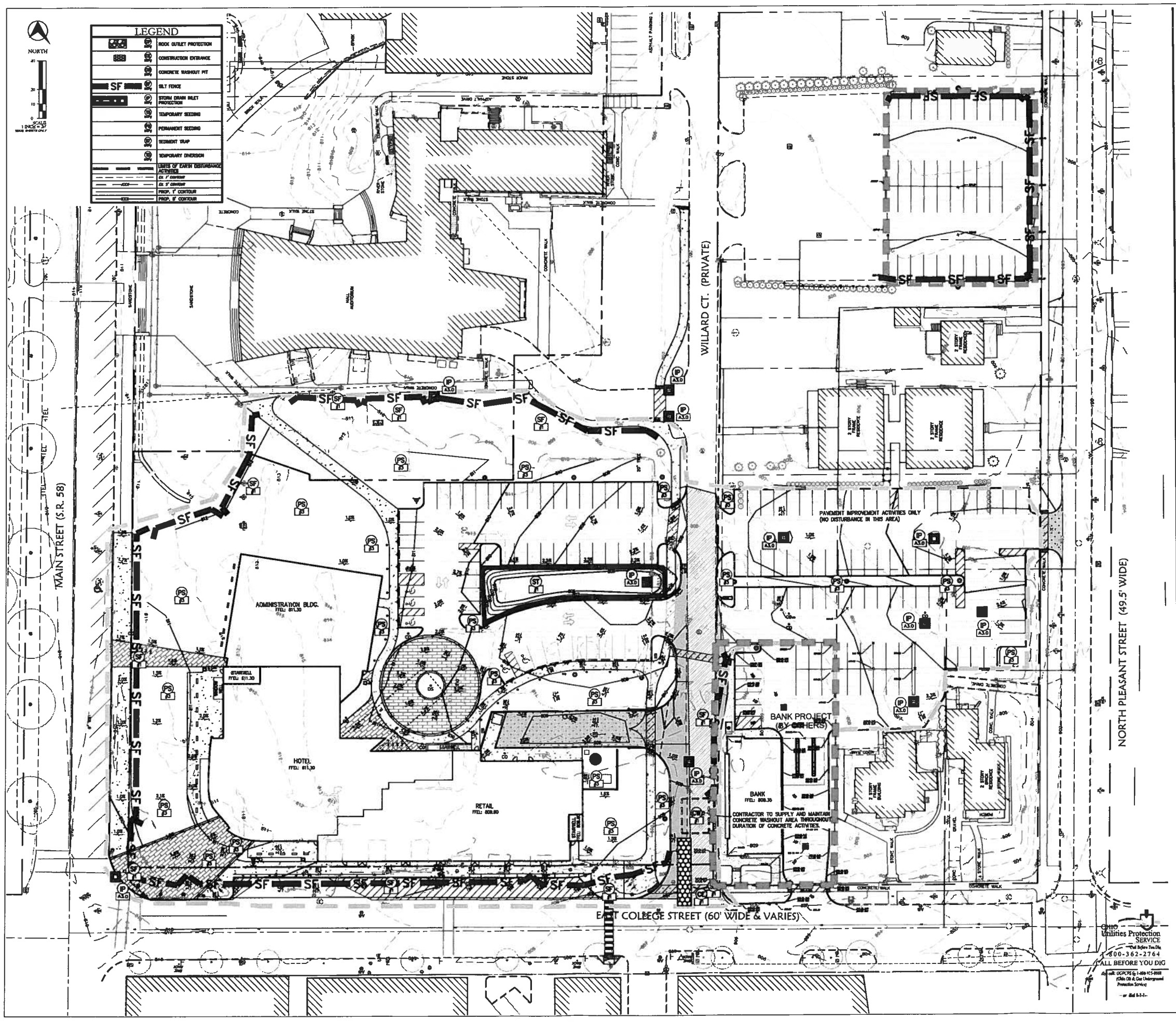
SITE SURVEY DRAWING

Drawn By: JSO
Checked By: DJH
Project Number: 2012007

Sheet Number: C1.0



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NO.	DATE	DESCRIPTION
	05.28.2014	ISSUED FOR BUILDING PERMIT
1	05.28.2014	ISSUED FOR ADDENDUM NO. 1
	03.31.2014	CONTRACT PROGRESS SET
	07.17.2013	ISSUED FOR SITE PLAN REVIEW
	06.07.2013	ISSUED FOR 100% DD
	05.10.2013	ISSUED FOR 50% DD

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SWP3 - EROSION & SED. CONTROL PLAN

Drawn By: JSO
Checked By: DJN
Project Number: 2012007
Sheet Number: C2.2

Bioretention Area (B)

Description

Bioretention practices are stormwater basins that utilize a soil media, mulch and vegetation to treat runoff and improve water quality for small drainage areas. Bioretention practices provide effective treatment for many runoff quality problems including reduction of total suspended solids, heavy metals, organic compounds, bacteria and nutrients (phosphorous and nitrogen) by promoting settling, adsorption, microbial breakdown, and nutrient assimilation by plants.

A bioretention area consists of a depression that allows shallow ponding of runoff and gradual percolation through a soil media, after which it either infiltrates through undisturbed soils or enters the storm sewer system through an underdrain system. Bioretention practices are sized for common storm events (the water quality volume) whereas runoff volumes from larger events are typically designed to bypass these practices.

Mulch Layer – The mulch layer shall consist of coarse shredded hardwood mulch. Pine mulches and fine or chipped hardwood mulches may not be used since they tend to float and move, and may block drainage systems, or leave the area with high flows.

Planting Layer – The planting soil for this facility shall be a uniform mix, free of stones, stumps, roots, or other similar objects larger than 2 inches. No other materials or substances shall be mixed or dumped within the bioretention area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soils and soil mixes must be certified by a qualified laboratory (1 test per 100 y3 of soil) and have the following attributes:

- Texture class: sandy loam or loamy sand. Having no less than 72% sand and no greater than 10% clay considering only the mineral fraction of the soil.
- pH range: 5.5–7.0
- Soluble Salts: 500 ppm maximum
- Organic matter: 5–30%
- Phosphorus: soil p–index should be between 15 and 40
- Sand added to meet textural class or the composition below shall be clean and meet AASHTO M–6 or ASTM C–33 with a grain size of 0.02–0.04 inches.

Filter Layer – A permeable non–woven geotextile with a flow rate exceeding 110 gpm (ASTM 4491). Puncture Strength – 125 lb. (ASTM D–751), Mullen Burst Strength – 400 psi (ASTM D–1117), Tensile Strength – 300 lb. (ASTM D–1682).

Gravel Layer and Underdrain System – A gravel bed consisting of #57 washed stone shall be provided as a drainage medium and bedding material. The gravel layer shall have a minimum of 3–in. of gravel provided above and below underdrain pipes.

Underdrains shall be a perforated pipe capable of withstanding the expected load above it and exceeding the drainage capacity of the planting soil layer. The following requirements apply to underdrains:

- The underdrain system shall be placed at a minimum 0.5% slope.
- Underdrain pipes shall be a minimum 6–in. diameter perforated pipe. See improvement plans for specified size.
- Underdrains are placed within a layer of #57 washed gravel, having a minimum of 3–in. of gravel above and 3–in. below the pipe.
- Underdrains pipes shall end with a cap, or an elbow with a vertical pipe providing observation and/or cleanout at the elevated end of the pipe. Observation/cleanout pipes shall consist of a minimum 4 inch diameter vertical non–perforated PVC pipe extending to the surface of the practice and sealed with a removable watertight cap.
- Underdrains shall drain to an existing drainage system or other suitable stable outlet having positive drainage.

Planting Materials – See the landscape plan for species and location of all proposed plantings within the bioretention area.

Bioretention Required Ponding Area and Drawdown Time

$A = (WQv)(d_f)/(k)(h_o+h_f)(t_f)$ (based on Darcy's Law)

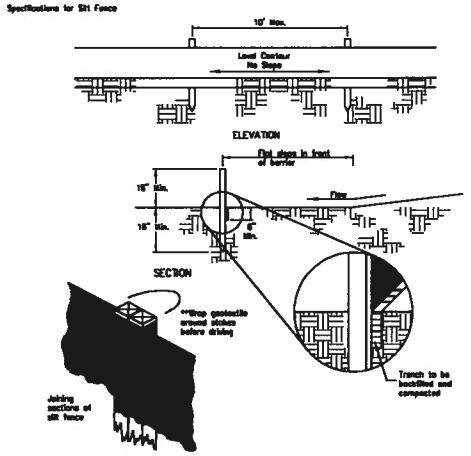
- A = Surface area of the bioretained ponding area (Square Feet)
- WQv = Treatable water quality volume (Cubic Feet)
- d_f = Planting soil depth (2.5 Feet minimum)
- k = Coefficient of permeability of planting media (Feet/Day)
- h_o = Average height of water above planting soil and mulch (Feet)
- t_f = Design filter bed drain time (Days) 1.00 days or 48 hrs. required by OEPA

Silt Fence (SF)

Description

Silt fence is a sediment–trapping practice utilizing a geotextile fence, topography and sometimes vegetation to cause sediment deposition. Silt fence reduces runoff's ability to transport sediment by ponding runoff and dissipating small rills or concentrated flow into uniform sheet flow. Silt fence is used to prevent sediment–laden sheet runoff from entering into downstream creeks and sewer systems.

Specifications for Silt Fence



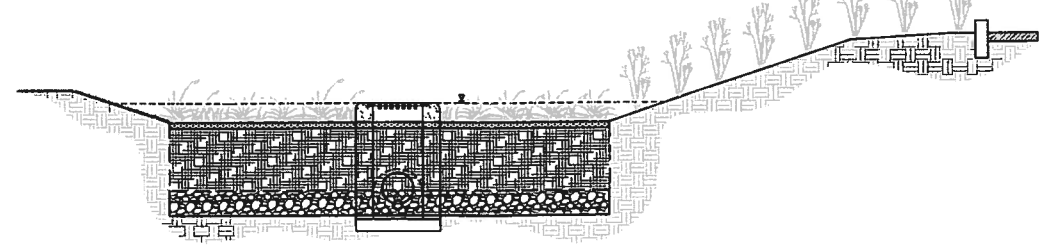
1. Silt fence shall be constructed before upslope land disturbance begins.
2. All silt fence shall be placed as close to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions that may carry concentrated flows to the silt fence are dissipated along its length.
3. Ends of the silt fence should be brought upslope slightly so that water ponded by the silt fence will be prevented from flowing around the ends.
4. Silt fence shall be placed on the farthest area available.
5. Where possible, vegetation shall be preserved for 5 feet (or as much as possible) upslope from the silt fence. If vegetation is removed, it shall be reestablished within 7 days from the installation of the silt fence.
6. The height of the silt fence shall be a minimum of 16 inches above the original ground surface.
7. The silt fence shall be placed in an excavated or sliced trench cut a minimum of 4 inches deep. The trench shall be made with a trencher, cable laying machine, sliding machine, or other suitable device that will ensure an adequate uniform trench depth.
8. The silt fence shall be placed with the stakes on the downslope side of the geotextile. A minimum of 8 inches of geotextile must be below the ground surface. Excess material shall lay on the bottom of the 6–inch deep trench. The trench shall be backfilled and compacted on both sides of the fabric.
9. Seams between sections of silt fence shall be spliced together only at a support post with a minimum 6–in. overlap prior to driving into ground. (see detail).
10. Maintenance – Silt fence shall allow runoff to pass only as diffuse flow through the geotextile. If runoff overtops the silt fence, flows under the fabric or around the fence ends, or in any other way allows a concentrated flow discharge, one of the following shall be performed, as appropriate: 1) the layout of the silt fence shall be changed, 2) accumulated sediment shall be removed, or 3) other practices shall be installed.
   - Sediment deposits shall be routinely removed when the deposit reaches approximately one–half the height of the silt fence.
   - Silt fences shall be inspected after each rainfall and at least daily during prolonged rainfall. The location of the existing silt fence shall be reviewed daily to ensure its proper location and effectiveness. If damaged, the silt fence shall be repaired immediately.

Criteria for Silt Fence Materials

1. Fence post – The length shall be a minimum of 32 inches. Wood post will be 3–by–2–in. nominal dimensioned hardwood of sound quality. They shall be free of knots, splits, and other visible imperfections, that will weaken the posts. The maximum spacing between posts shall be 10 ft. Posts shall be driven a minimum 16 inches into the ground, where possible. If not possible, the posts shall be adequately secured to prevent overturning of the fence due to sediment/water loading.
2. Silt fence fabric – See chart below.

Fabric Properties	Values	Test Method
Minimum Tensile Strength	120 lbs (535 N)	ASTM D4632
Maximum Elongation at 60 lbs	30%	ASTM D4632
Minimum Puncture Strength	50 lbs (220 N)	ASTM D4833
Minimum Tear Strength	40 lbs (180 N)	ASTM D4533
Apparent Opening Size	≤ 0.84 mm	ASTM D4751
Minimum Permittivity	1510–2 gms–1	ASTM D4491
UV Exposure Strength Retention	70%	ASTM D4355

Specifications for Bioretention Area (B1)



Water Quality Volume

WQv required = $C*P*A/12$

WQv required = Water Quality Volume in Acre–Feet
- C = 0.95 Runoff Coefficient
- P = 0.75 Inch Precipitation Depth
- A = 1.07 Ac. Area Draining Into Bioretention

WQv required = 0.05 Acre–Feet

WQv required = 0.05 Acre–Feet = 2,022 Cubic Feet

20% Storage Increase = 0.20 * 2,022 = 404 Cubic Feet

Total WQv (Required) = 2,426 Cubic Feet

Bioretention Required Ponding Area

- WQv = 2,426 Cubic Feet (Treatable)
- d_f = 2.5 Feet
- k = 1.0 Feet/Day
- h_o = 0.75 Feet
- t_f = 1.00 Days

A_{max} = (12300)(2.5)/[(1.0)(0.75+2.5)(1.00)] Square Feet

A_{max} = 2,273 Square Feet

Bioretention Drawdown Time

- A = 2,273 Square Feet
- WQv = 2,426 Cubic Feet (Treatable)
- d_f = 2.5 Feet
- k = 1.0 Feet/Day (Anticipated future condition)
- h_o = 0.75 Feet

t_f = (12300)(2.5)/[(1.0)(0.75+2.5)(2.273)] Days

t_f = 1.00 Days

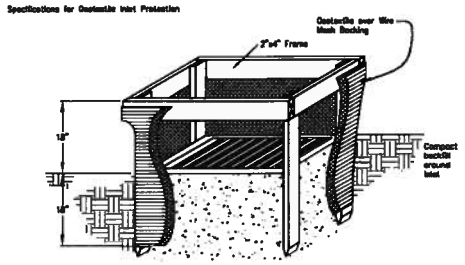
Storm Drain Inlet Protection (IP)

Description

Storm drain inlet protection devices remove sediment from storm water before it enters storm sewers and downstream areas. Inlet protection devices are sediment barriers that may be constructed of washed gravel or crushed stone, geotextile fabrics and other materials that are supported around or across storm drain inlets.

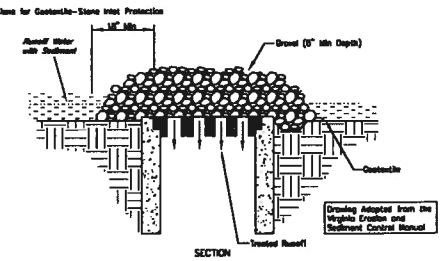
Inlet protection is installed to capture some sediment and reduce the maintenance of storm sewers and other underground piping systems prior to the site being stabilized. Due to their poorer effectiveness, inlet protection is considered a secondary sediment control to be used in conjunction with other more effective controls.

Specifications for Geotextile Inlet Protection



1. Inlet protection shall be constructed either before upslope land disturbance begins or before the inlet becomes functional.
2. The earth around the inlet shall be excavated completely to a depth at least 18 inches.
3. The wooden frame shall be constructed of 2–inch by 4–inch construction–grade lumber. The 2 inch by 4–inch posts shall be sharpened to a point. Place the posts at four corners of the inlet and the top portion of 2–inch by 4–inch frame assembled using the overlap joint shown. The top of the frame shall be at least 8 inches below adjacent roads if ponded water will pose a safety hazard to traffic.
4. Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stapled tightly around the frame and fastened securely to the frame.
5. Geotextile material shall have an equivalent opening size of 20–40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 inches below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened in the same post.
6. Backfill shall be placed around the inlet in compacted 8 inch layers until the earth is even with notch elevation on ends and top elevation on sides.
7. A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression. The top of the dike shall be at least 6 inches higher than the top of the frame.

Specifications for Geotextile–Stone Inlet Protection



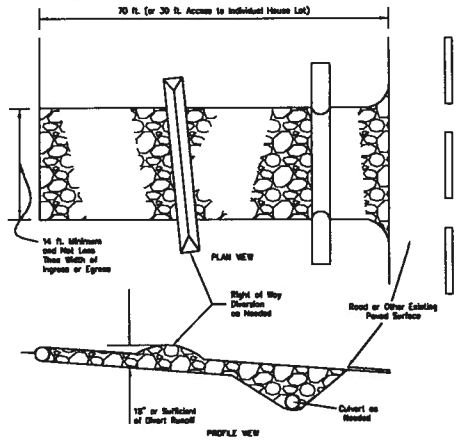
1. Inlet protection shall be constructed either before upslope land disturbance begins or before the inlet becomes functional.
2. Geotextile and/or wire material shall be placed over the top of the storm sewer and approximately six (6) inches of 2–inch or greater clean aggregate placed on top. Extra support for geotextile is provided by placing hardware cloth or wire mesh across the inlet cover. The wire should be no larger than 3" mesh and should extend an extra 12 inches across the top and sides of the inlet cover.
3. Maintenance must be performed regularly, especially after storm events. When clogging of the stone or geotextile occurs, the material must be removed and replaced.

Construction Entrance (CE)

Description

A construction entrance is a stabilized pad of stone underlain with a geotextile and is used to reduce the amount of mud tracked off–site onto construction traffic. Located at points of ingress/egress, the practice is used to reduce the amount of mud tracked off–site onto construction traffic.

Specifications for Construction Entrance



1. Stone Size – ODOT # 2 (1.5–3.5 inch) stone shall be used, or recycled concrete equivalent.
2. Length – The Construction entrance need be as long as required to stabilize tire traffic areas but not less than 70 ft. (exception apply for a minimum to single residence lot).
3. Thickness – The stone layer shall be at least 6 inches thick for light duty entrances or at least 10 inches for heavy duty use.
4. Width – The entrance shall be at least 14 feet wide, but not less than the full width at points where ingress or egress occurs.
5. Geotextile – A geotextile shall be laid over the entire area prior to placing stone. It shall be composed of strong rot–proof polymeric fibers and meet the following specifications:

Geotextile Specifications for Construction Entrances	
Minimum Tensile Strength	200 lbs.
Minimum Puncture Strength	80 psi.
Minimum Tear Strength	50 lbs.
Minimum Burst Strength	300 psi.
Minimum Elongation	20%
Equivalent Opening Size	100–0.0mm.
Permeability	1x10–3 cm/sec.

6. Piping – The construction entrance must be installed as soon as is practicable before major grading activities.
7. Culvert – A pipe or culvert shall be constructed under the entrance if needed to prevent surface water from flowing across the entrance. It is permit runoff from being diverted onto a paved surface.
8. Maintenance – The entrance shall be maintained in a condition which will prevent tracking or flow of mud onto public roads. Repair and/or cleaning of any measures used to trap sediment must be removed immediately. Removal shall be accomplished by scraping or excavating.
9. Washing – Washing of sediment alone shall be applied at conditions allowed, but called, trapped, washed or brushed onto public roads, or any surface where runoff is not checked by sediment controls, must be removed immediately. Removal shall be accomplished by scraping or excavating.
10. Construction entrances shall not be relied upon to remove mud from vehicles and prevent off–site tracking. Vehicles that enter and leave the construction–site shall be restricted from muddy areas.
11. Removal – The entrance shall remain in place until the disturbed area is stabilized or replaced with a permanent roadway or entrance.

Additional Construction Site Pollution Controls (PC)

Description

Although sediment is the primary pollutant of concern resulting from construction activity, other pollutants need to be considered as well. These include petrochemicals: fuel, oil, and asphalt; and construction chemicals and materials: paints, solvents, fertilizer, soil additives, concrete wash water, etc. Also included are solid wastes and construction debris. Keeping these substances from polluting runoff can be accomplished to a large extent through good housekeeping and following the manufacturer's recommendations for their use and disposal.

Specifications for Additional Construction Site Pollution Controls

1. Construction personnel, including subcontractors who may use or handle hazardous or toxic materials, shall be made aware of the following general guidelines regarding disposal and handling of hazardous and construction wastes:
   - Prevent spills
   - Use products up
   - Follow label directions for disposal
   - Remove lids from empty bottles and cans when disposing in trash
   - Recycle wastes whenever possible
   - Don't pour into waterways, storm drains or onto the ground
   - Don't pour down the sink, floor drain or septic tanks
   - Don't bury chemicals or containers
   - Don't burn chemicals or containers
   - Don't mix chemicals together
2. Dumsterers shall be provided for the proper collection of all waste material including construction debris, trash, petroleum products and any hazardous materials used on–site. Dumsterers shall be covered and not leaking. All waste material shall be disposed of at facilities approved for that material. Construction Demolition and Debris (CD&D) waste must be disposed of at an Ohio EPA approved CD&D landfill.
3. No construction related waste materials are to be buried on–site. By exception, clean fill (bricks, hardened concrete, soil) may be utilized in a way which does not encroach upon natural wetlands, streams or floodplains or result in the contamination of waters of the state.
4. Handling Construction Chemicals. Mixing, pumping, transferring or other handling of construction chemicals such as fertilizer, lime, asphalt, concrete curing compounds, and all other potentially hazardous materials shall be performed in an area away from any watercourse, ditch or storm drain.
5. Equipment Fueling and Maintenance, oil changing, etc., shall be performed away from watercourses, ditches or storm drains, in an area designated for that purpose. The designated area shall be equipped for recycling all used existing oils. Secondary containment shall be provided for all fuel oil storage tanks. These areas must be inspected every seven days and within 24 hrs. of a 0.5 inch or greater rain event to ensure there are no exposed materials which would contaminate storm water. Site operators must be aware that Spill Prevention Control and Countermeasures (SPCC) requirements may apply. An SPCC plan is required for sites with one single above ground tank of 660 gallons or more, accumulative above ground storage of 1,320 gallons or more, or 42,000 gallons of underground storage. Contaminated soils must be disposed of in accordance with Item 8.
6. Concrete Wash Water shall not be allowed to flow to streams, ditches, storm drains, or any other water conveyance. A sump or pit with no material for discharge shall be constructed if needed to contain concrete wash water. Field tile or other subsurface drainage structures within 10 ft. of the sump shall be cut and plugged. For small projects, brush chutes may be placed away from any water conveyance.
7. Spill Reporting Requirements: Spills on pavement shall be cleaned with sawdust or kitty litter and disposed of with the trash at a licensed sanitary landfill. Hazardous or industrial wastes such as most solvents, gasoline, air–borne paints, and cement curing compounds require special handling. Spills shall be reported to Ohio EPA (1–800–282–9378). Spills of 25 gallons or more of petroleum products shall be reported to Ohio EPA, the local fire department, and the Local Emergency Planning Committee within 30 min. of the discovery of the release. All spills which contact waters of the state must be reported to Ohio EPA.
8. Contaminated Soils. If substances such as oil, diesel fuel, hydraulic fluid, antifreeze, etc. are spilled, leaked, or released onto the soil, the soil should be dug up and disposed of at a licensed sanitary landfill or other approved petroleum contaminated soil remediation facility. (and a construction/demolition debris landfill). Note that storm water not all associated with contaminated soils are not be authorized under Ohio EPA's General Storm Water Permit associated with Construction Activities.
9. Open Burning. No materials containing rubber, grease, asphalt, or petroleum products, such as tires, waterproofing, plastics or plastic coated wire may be burned (OAC 3745–19). Open burning is not allowed in restricted areas, which are defined as: 1) within corporation limits; 2) within 1000 feet outside a municipal corporation having a population of to 10,000; and 3) a one mile zone outside of a corporation of 10, 000 or more. Outside of restricted areas, no open burning is allowed within a 1000 feet of an occupied building on another property. Open burning is permissible in a restricted area for heating tar, welding, smoking pots and similar occupational needs, and heating for warmth or outdoor barbequet. Outside of restricted areas, open burning is permissible for landscape or land–clearing wastes (plant materials, with prior written permission from Ohio EPA), and agricultural wastes, excluding buildings.
10. Dust Control or dust suppressants shall be used to prevent nuisance conditions, in accordance with the manufacturer's specifications and in a manner, which prevent a discharge to waters of the state. Sufficient distance must be provided between applications and nearby bridges, catch basins, and other waterways. Application (excluding water) may not occur when rain is imminent as noted in the short term forecast. Used oil may not be applied for dust control.
11. Other Air Permitting Requirements: Certain activities associated with construction will require air permits including but not limited to: mobile concrete batch plants, mobile asphalt plants, concrete crushers, large generators, etc. These activities will require specific Ohio EPA Air Permits for installation and operation. Operators must seek authorization from the corresponding district of Ohio EPA. For demolition of all commercial sites, a Notification for Renovation and Demolition must be submitted to Ohio EPA to determine if asbestos corrective actions are required.
12. Process Waste Water/Leachate Management. Ohio EPA's Construction General Permit only allows the discharge of storm water and does not include other waste streams/discharges such as vehicle and/or equipment washing, on–site septic leachate concrete wash outs, which are considered process wastewaters. All process wastewaters must be collected and properly disposed at an approved disposal facility. In the event, leachate or seepage is discharged; it must be isolated for collection and proper disposal and corrective actions taken to eliminate the source of water value.
13. A Permit To Install (PTI) is required prior to the construction of all centralized sanitary systems, including sewer extensions, and sewerage systems (except those serving one, two, and three family dwellings) and potable water lines. Plans must be submitted and approved by Ohio EPA. Issuance of an Ohio EPA Construction General Storm Water Permit does not authorize the installation of any sewerage system where Ohio EPA has not approved a PTI.

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NEFF & ASSOCIATES

NO.	DATE	DESCRIPTION
	02.28.2013	PLANNING COMMISSION SUBMITTAL
	05.06.2013	PLANNING COMMISSION SUBMITTAL
	07.17.2013	ISSUED FOR SITE PLAN REVIEW
	08.07.2013	ISSUED FOR 100% DD

OBERLIN COLLEGE GATEWAY BUILDING

Oberlin, Ohio

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SWP3 DETAILS

Drawn By: JSO
Checked By: DJN
Project Number: 2012007
Sheet Number: C2.3

Temporary Seeding (TS)

Description

Temporary seedings establish temporary cover on disturbed areas by starting appropriate rapidly growing annual grasses or small grains. Temporary seeding provides erosion control on areas in between construction operations. Grasses, which are quick growing, are seeded and usually mulched to provide prompt, temporary soil stabilization. It effectively minimizes the area of a construction site prone to erosion and should be used everywhere the sequence of construction operations allows vegetation to be established.

Specifications for Temporary Seeding

Temporary Seeding Species Selection			
Seeding Dates	Species	Lb./1000 ft2	Lb./Acre
March 1 to August 15	Oats	3	128 (4 Bushel)
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Perennial Ryegrass	1	40
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Annual Ryegrass	1.25	55
	Perennial Ryegrass	3.25	142
	Creeping Red Fescue	0.4	17
	Kentucky Bluegrass	0.4	17
August 16th to November	Oats	3	128 (3 Bushel)
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Rye	3	112 (2 Bushel)
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Wheat	3	180 (3 Bushel)
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Perennial Rye	1	40
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Annual Ryegrass	1.25	40
	Perennial Ryegrass	3.25	40
	Creeping Red Fescue	0.4	40
	Kentucky Bluegrass	0.4	
November 1 to Feb. 29	Use mulch only or dormant seeding		

Note: Other approved species may be substituted.

1. Structural erosion and sediment control practices such as diversions and sediment traps shall be installed and stabilized with temporary seeding prior to grading for rest of the construction site.
2. Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 21 days or greater.
3. These site areas shall be seeded within 7 days after grading.
4. The seedbed should be pulverized and loose to ensure the success of establishing vegetation. Temporary seeding should not be applied on a compacted seedbed or on frozen ground.
5. Soil Amendments – Temporary vegetation establishes and establish adequate stands of vegetation, which may require the use of soil amendments. Lime relief for lime and fertilizer shall be used.
6. Seeding Method – Seed shall be applied uniformly with a cyclone spreader, drill, cultipacker seeder, or hydroseeder. Lime Rotatile, seed that has been inoculated shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without interruption.

Mulching Temporary Seeding

1. Application of temporary mulching shall include mulch, which shall be applied during or immediately after seeding. Seedings made during optimum seeding dates on favorable, very flat soil conditions may not need mulch to achieve adequate stabilization.
2. Materials
   - Straw – If straw is used, it shall be unrotted small-grain straw applied at a rate of 2 tons/Acre or 90 lb./1,000 sq.-ft. (2-3 bales)
   - Hydromulch – If wood cellulose fiber is used, it shall be used at 2,000 lbs/Acre, or 45 lb./1,000 sq.-ft.
   - Other – Other acceptable mulches include mulch mattings applied according to manufacturer's recommendations or wood chips applied at 6 tons/Acre.
3. Straw mulch must be anchored immediately to minimize loss by wind or water. Anchoring methods:
   - Mechanical – A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but left to a length of approximately 6 inches.
   - Mulch Netting – Netting shall be used according to manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
   - Synthetic Binders – Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equivalent may be used at rates specified by the manufacturer.
   - Wood-Cellulose Fiber – Wood –cellulose fiber binder shall be applied at a wet dry wt. of 750 lb./Ac. The wood-cellulose fiber shall be mixed with water and the mixture shall contain a minimum of 50 lb./100 gal.

Mulching (M)

Description

A protective layer of mulch, usually of straw, applied to bare soil is used to abate erosion by shielding it from raindrop impact. Mulch also helps establish vegetation by conserving moisture and creating favorable conditions for seeds to germinate.

Specifications for Mulching

1. Mulch and other appropriate vegetative practices shall be applied to disturbed areas within 7 days of grading if the area is to remain dormant (undisturbed) for more than 21 days or on areas and portions of the site which can be brought to final grade.
2. Mulch shall consist of one of the following:
   - Straw – Straw shall be unrotted small grain straw applied at the rate of 2 tons/Ac. or 90 lb./1,000 sq.-ft. (two to three bales). The straw mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For a uniform distribution of hand-spread mulch, divide area into approximately 1,000 sq.-ft. sections and placed two 45-lb. bales of straw in each section.
   - Hydromulcher – Wood cellulose fiber should be used at 2,000 lb./Ac. or 45lb./1,000 sq.-ft.
   - Other – Acceptable mulches include mulch mattings and rolled erosion control products applied according to manufacturer's recommendations or wood mulch/chips applied at 10-30 tons/Ac.
3. Mulch Anchoring – Mulch shall be anchored immediately to minimize loss by wind or runoff. The following are acceptable methods for anchoring mulch.
   - Mechanical – Use a disk, crimper, or similar type tool set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but left generally longer than 6 inches.
   - Mulch Mattings – Use according to the manufacturer's recommendations, following all placement and anchoring requirements. Use in areas of water concentration and steep slopes to hold mulch in place.
   - Synthetic Binders – For straw mulch, synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer. All applications of Synthetic Binders must be conducted in such manner where there is no contact with waters of the state.
   - Wood Cellulose Fiber – Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a wet dry weight of 750lb./Acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal. of wood cellulose fiber.

Permanent Seeding (PS)

Description

Permanent vegetation is established on areas that will not be re-disturbed for periods longer than 12 months. Permanent seeding includes site preparation, seedbed preparation, planting seed, mulching, irrigation and maintenance.

Permanent vegetation is used to stabilize soil, reduce erosion, prevent sediment pollution, reduce runoff by promoting infiltration, and provide storm water quality benefits offered by dense grass cover.

Specifications for Permanent Seeding

Site Preparation

1. Subsoiler, plow, or other implement shall be used to reduce soil compaction and allow maximum infiltration. (Maximizing infiltration will help control both runoff rate and water quality.) Subsoiling should be done when the soil moisture is low enough to allow the soil to crack or fracture. Subsoiling shall not be done on slip-prone areas where soil preparation should be limited to what is necessary for establishing vegetation.
2. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation and seeding.
3. Topsoil shall be applied where needed to establish vegetation.

Seedbed Preparation

1. Lime – Agricultural ground limestone shall be applied to acid soil as recommended by a soil test. In lieu of a soil test, lime shall be applied at the rate of 100 pounds per 1,000-sq. ft. or 2 tons per acre.
2. Fertilizer – Fertilizer shall be applied as recommended by a soil test. In place of a soil test, fertilizer shall be applied at a rate of 25 pounds per 1,000-sq. ft. or 1000 pounds per acre of a 10-10-10 or 12-12-12 analysis.
3. The lime and fertilizer shall be worked into the soil with a disk harrow, spring-tooth harrow, or other suitable field implement to a depth of 3 inches. On sloping land, lime and shall be worked on the contour.

Seeding Dates and Soil Conditions

Seeding should be done March 1 to May 31 or August 1 to September 30. If seeding occurs outside of the above specified dates, additional mulch and irrigation may be required to ensure a minimum of 80% germination. Tillage for seedbed preparation should be done when the soil is dry enough to crumble and not form ribbons when compressed by hand. For winter seeding, see the following section on dormant seeding.

Dormant Seedings

1. Seedings should not be made from October 1 through November 20. During this period, the seeds are likely to germinate but probably will not be able to survive the winter.
2. The following methods may be used for "Dormant Seeding":
   - From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20, and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50% for this type of seeding.
   - From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilize, apply the selected seed mixture, mulch and anchor. Increase the seeding rates by 50% for this type of seeding.
   - Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro-seeder (slurry may include seed and fertilizer) on a firm, moist seedbed.
   - Where feasible, except when a cultipacker type seeder is used, the seedbed should be firmed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.

Mulching

1. Mulch material shall be applied immediately after seeding. Dormant seeding shall be mulched. 100% of the ground surface shall be covered with an approved material.
2. Materials:
   - Straw – If straw is used it shall be unrotted small-grain straw applied at the rate of 2 tons per acre or 90 pounds (two to three bales) per 1,000-sq. ft. The mulch shall be spread uniformly by hand or mechanically applied on the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft. sections and spread two 45-lb. bales of straw in each section.
   - Hydromulcher – If wood cellulose fiber is used, it shall be applied at 2000 lb./Ac. or 45 lb./1,000 sq.-ft.
   - Other – Other acceptable mulches include rolled erosion control mattings or blankets applied according to manufacturer's recommendations or wood chips applied at 6 tons per acre.
3. Straw and Mulch Anchoring Methods:
   Straw mulch shall be anchored immediately to minimize loss by wind or water.
   - Mechanical – A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 inches.
   - Mulch Netting – Netting shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
   - Asphalt Emulsion – Asphalt shall be applied as recommended by the manufacturer at the rate of 160 gallons per acre.
   - Synthetic Binders – Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equivalent may be used at rates specified by the manufacturer.
   - Wood Cellulose Fiber – Wood cellulose fiber shall be applied at a wet dry weight of 750 pounds per acre. The wood cellulose fiber shall be mixed with water with the mixture containing a maximum of 50 pounds cellulose per 100 gallons of water.

Irrigation

Permanent seeding shall include irrigation to establish vegetation during dry weather or on adverse site conditions, which require adequate moisture for seed germination and plant growth.

Irrigation rates shall be monitored to prevent erosion and damage to seeded areas from excessive runoff.

Seed Mix	Seeding Rate		Notes:
	Lbs./Acre	Lbs./1,000 Sq. Feet	
General Use			
Creeping Red Fescue	20-40	1/2-1	For areas mowing & for waterways with <2.0 ft/sec velocity
Domestic Ryegrass	10-20	1/4-1/2	
Kentucky Bluegrass	20-40	1/2-1	
Tall Fescue	40-80	1-1 1/4	
Turf-type Fescue (Dwarf) Fescue	80	2 1/4	
Steep Banks or Cut Slopes			
Tall Fescue	40-80	1-1 1/4	
Crown Vetch	10-20	1/4-1/2	Do not seed later than August
Tall Fescue	30-50	1/2-3/4	
Flat Pea	30-50	1/2-3/4	Do not seed later than August
Tall Fescue	30-50	1/2-3/4	
Road Ditches and Swales			
Tall Fescue	40-80	1-1 1/4	
Turf-type (Dwarf) Fescue	80	2 1/4	
Kentucky Bluegrass	5	0.1	
Lawns			
Kentucky Bluegrass	100-200	2	
Perennial Ryegrass		2	
Kentucky Bluegrass	100-200	2	For shaded areas
Creeping Red Fescue		1-1/2	

Note: Other approved species may be substituted.

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CALL BEFORE YOU DIG
Also call: OCPUPS @ 1-800-925-0988
(Ohio Oil & Gas Underground Protection Service)
-- or dial 8-1-1--

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#CL	DATE	DESCRIPTION
	03.28.2014	PLANNING COMMISSION SUBMITTAL
	09.06.2013	PLANNING COMMISSION SUBMITTAL
	07.17.2013	ISSUED FOR SITE PLAN REVIEW
	06.07.2013	ISSUED FOR 100% DD

OBERLIN COLLEGE GATEWAY BUILDING

Oberlin, Ohio

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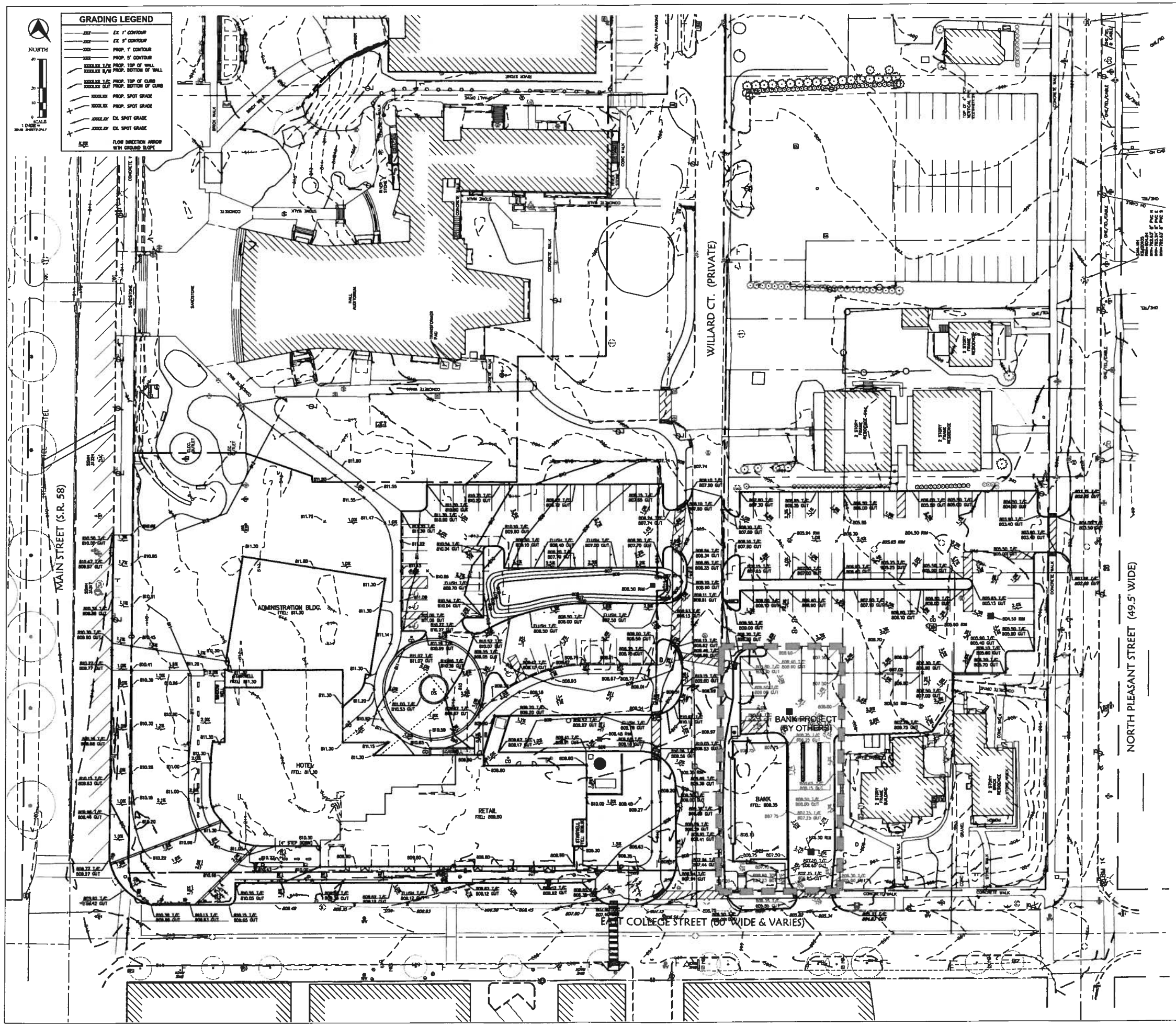
SWP3 DETAILS

Drawn By: JSO
Checked By: DJN
Project Number: 2012007
Sheet Number: C2.4



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NO.	DATE	DESCRIPTION
	05.30.2014	ISSUED FOR BUILDING PERMIT
1	05.30.2014	ISSUED FOR ADDENDUM NO. 1
	03.31.2014	CONTRACT PROGRESS SET
	07.17.2013	ISSUED FOR SITE PLAN REVIEW
	06.07.2013	ISSUED FOR 100% DD
	05.10.2013	ISSUED FOR 95% DD

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SITE GRADING PLAN

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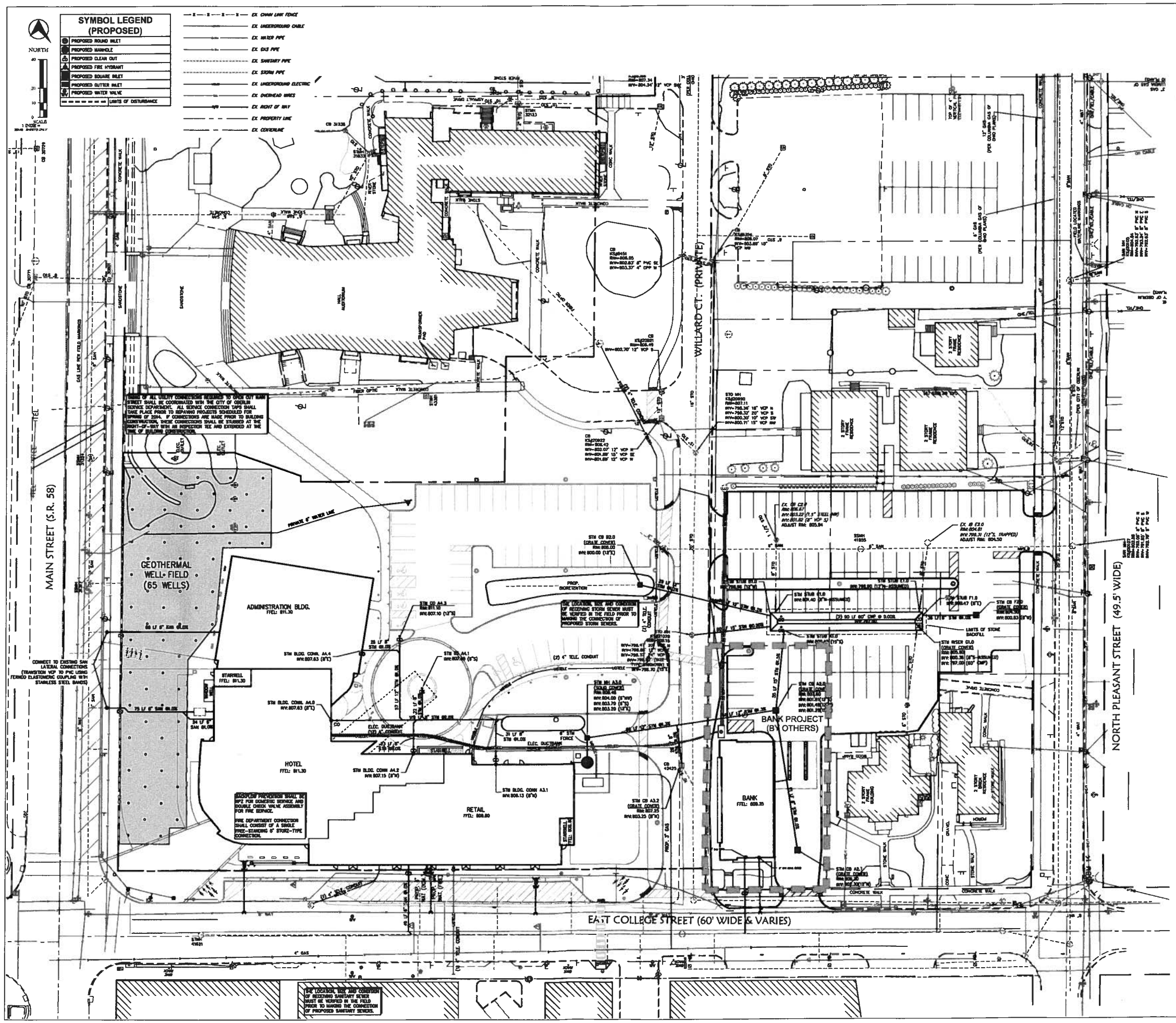
Sheet Number: C3.0



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	05.28.2014	ISSUED FOR BUILDING PERMIT
1	05.28.2014	ISSUED FOR ADDENDUM NO. 1
	03.31.2014	CONTRACT PROGRESS SET
	07.17.2013	ISSUED FOR SITE PLAN REVIEW
	06.07.2013	ISSUED FOR 100% DD
	05.10.2013	ISSUED FOR 50% DD

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SITE UTILITY PLAN

Drawn By: JSO
Checked By: DJN
Project Number: 2012007
Sheet Number: C4.0

LEGEND

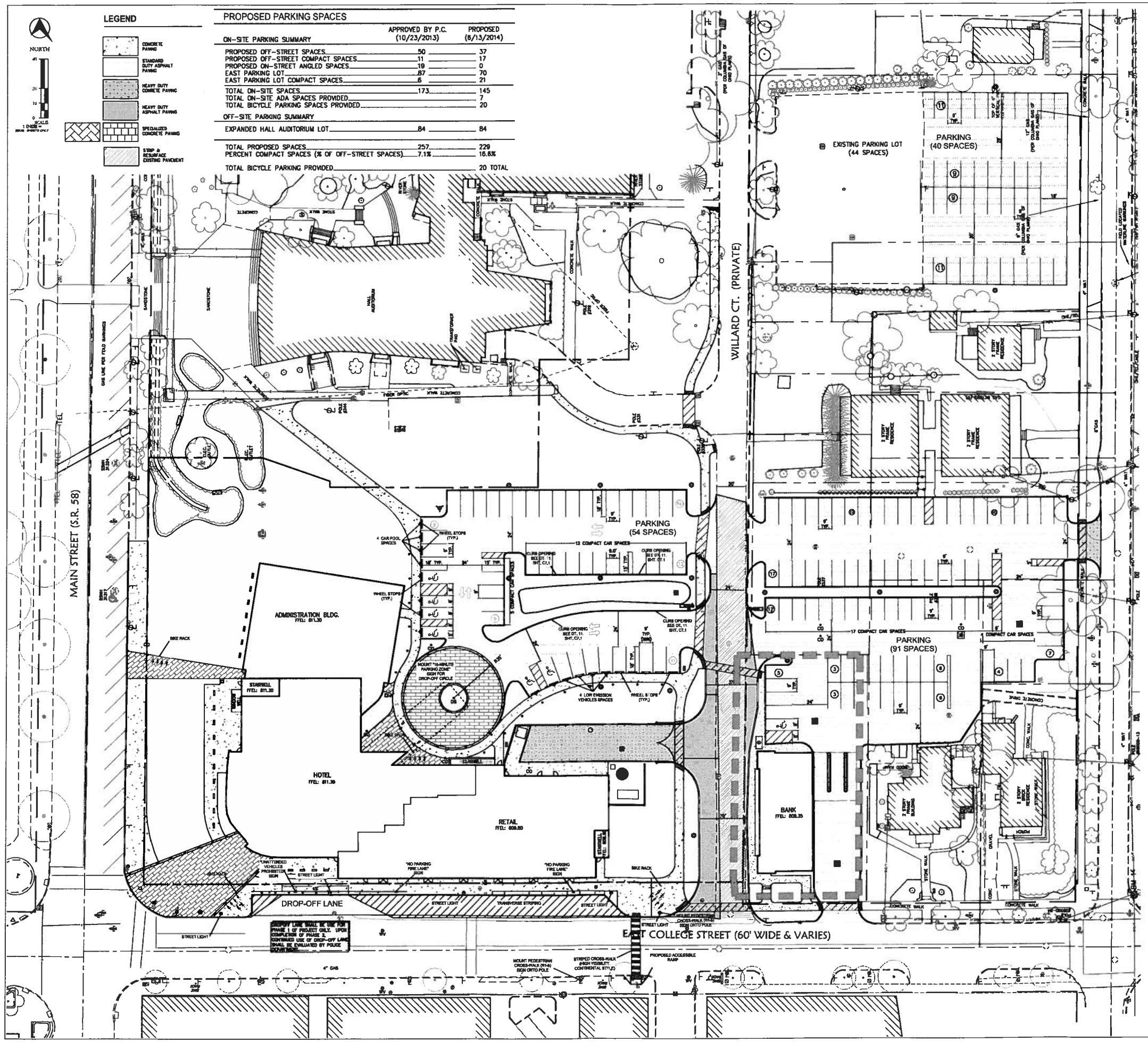
- CONCRETE PAVING
- STANDARD DUTY ASPHALT PAVING
- HEAVY DUTY CONCRETE PAVING
- HEAVY DUTY ASPHALT PAVING
- SPECIALIZED CONCRETE PAVING
- STRIP & RESURFACE EXISTING PAVEMENT

NORTH

SCALE 1 DIGIT = 20'-0"

PROPOSED PARKING SPACES

ON-SITE PARKING SUMMARY	APPROVED BY P.C. (10/23/2013)	PROPOSED (6/13/2014)
PROPOSED OFF-STREET SPACES	50	37
PROPOSED OFF-STREET COMPACT SPACES	11	17
PROPOSED ON-STREET ANGLED SPACES	19	0
EAST PARKING LOT	87	70
EAST PARKING LOT COMPACT SPACES	6	21
TOTAL ON-SITE SPACES	173	145
TOTAL ON-SITE ADA SPACES PROVIDED		7
TOTAL BICYCLE PARKING SPACES PROVIDED		20
OFF-SITE PARKING SUMMARY		
EXPANDED HALL AUDITORIUM LOT	84	84
TOTAL PROPOSED SPACES	257	229
PERCENT COMPACT SPACES (% OF OFF-STREET SPACES)	7.1%	16.6%
TOTAL BICYCLE PARKING PROVIDED		20 TOTAL



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	05.30.2014	ISSUED FOR BUILDING PERMIT
1	03.28.2014	ISSUED FOR ADDENDUM NO. 1
	03.21.2014	CONTRACT PROGRESS SET
	07.17.2013	ISSUED FOR SITE PLAN REVIEW
	05.07.2013	ISSUED FOR 100% DD
	08.10.2012	ISSUED FOR 50% DD

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SITE LAYOUT PLAN

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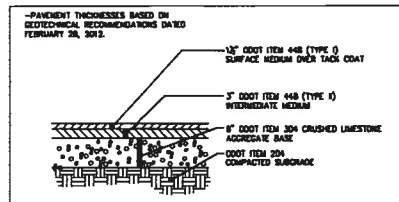
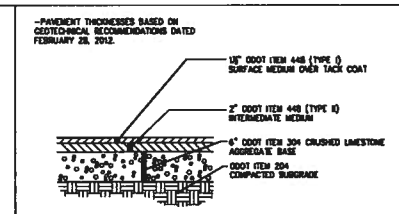
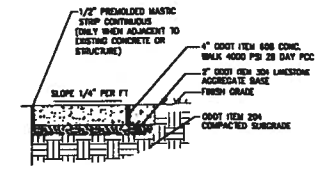
Sheet Number: C5.0



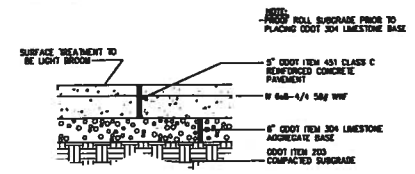
1 HEAVY DUTY ASPHALT PAVEMENT
NOT TO SCALE



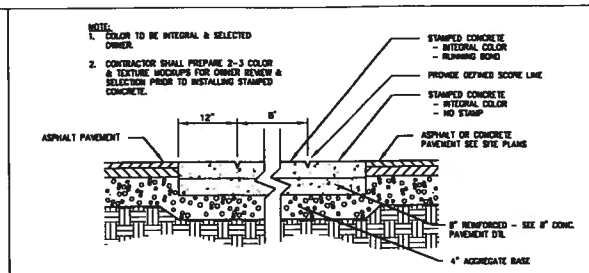
2 STANDARD DUTY ASPHALT PAVEMENT
NOT TO SCALE



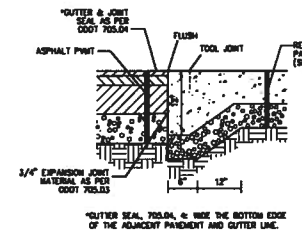
3 CONCRETE SIDEWALK
NOT TO SCALE



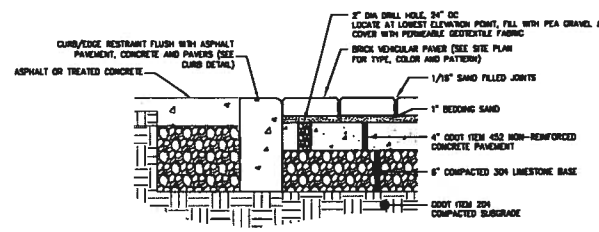
4 STANDARD DUTY CONCRETE PAVEMENT
NOT TO SCALE



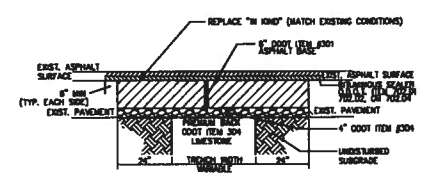
5 STAMPED CONCRETE SIDEWALK
NOT TO SCALE



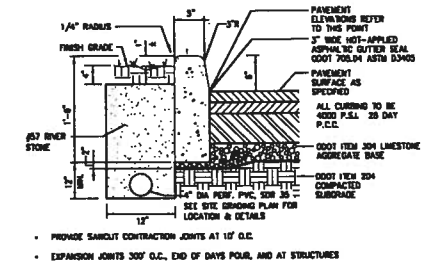
6 CONCRETE PAVEMENT AT ASPHALT PAVEMENT
NOT TO SCALE



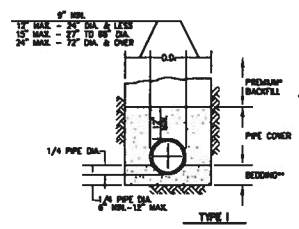
7 VEHICULAR BRICK PAVER DETAIL
NOT TO SCALE



8 REPAVING OVER UTILITY TRENCH-(ASPHALT)
NOT TO SCALE



9 6" VERTICAL CONCRETE CURB
NOT TO SCALE



* NOTE:
PROVIDE PREMIUM BACKFILL TO SUBGRADE UNDER ALL PROPOSED AND EXISTING PAVED AREAS INCLUDING SIDEWALK, OR WHEN TRENCH IS WITHIN 45° ZONE OF INFLUENCE OF PROPOSED PAVED AREAS OR BUILDING FOUNDATIONS. NATIVE BACKFILL SHALL ONLY BE USED WHEN APPROVED IN WRITING BY THE OWNER, OWNER'S GEOTECHNICAL ENGINEER AND THE CITY ENGINEER.

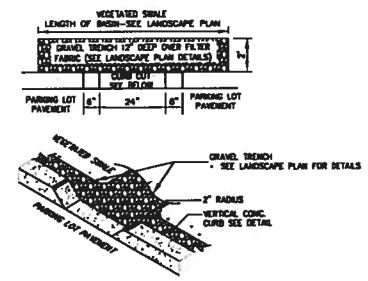
** NOTE:
LATERAL CONNECTIONS TO HAVE A MINIMUM BEDDING DEPTH OF 3" COARSE AGGREGATE.

BEDDING:
ASTM D2321, BEDDING SHALL CONSIST OF COARSE INTERLOCKING AGGREGATE No. 6, 67, 68, 7, 78, OR 8 FOR 60" OR SMALLER DIA. PIPE. FOR 66" DIA. PIPE OR LARGER No. 4 AGGREGATE MAY ALSO BE USED.

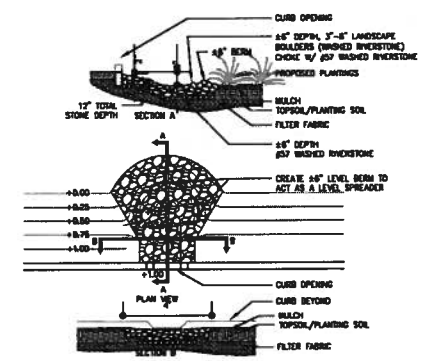
PREMIUM BACKFILL:
PREMIUM BACKFILL SHALL CONSIST OF ODOT ITEM 304 LIMESTONE.

PIPE COVER:
PIPE COVER SHALL CONSIST OF COARSE INTERLOCKING AGGREGATE No. 6, 67, 68, 7, 78, OR 8 LIMESTONE.

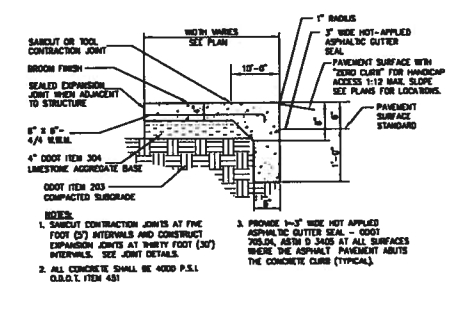
10 TYPICAL TRENCH DETAILS
NOT TO SCALE



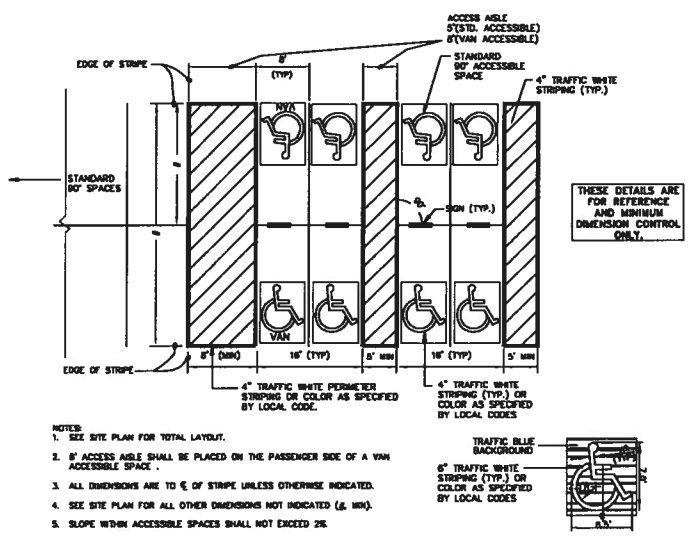
11 CURB CUT
NOT TO SCALE



12 GRAVEL AT CURB OPENING
NOT TO SCALE



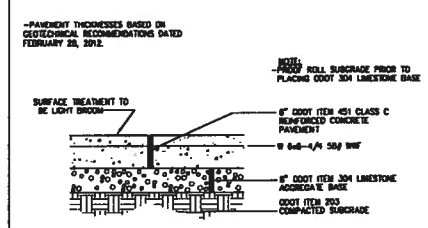
13 CONCRETE INTEGRAL CURB AND WALK
NOT TO SCALE



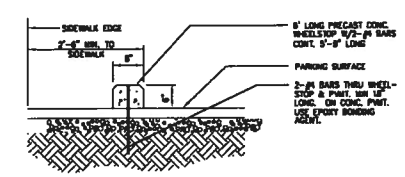
NOTES:
1. SEE SITE PLAN FOR TOTAL LAYOUT.
2. 8' ACCESS AISLE SHALL BE PLACED ON THE PASSENGER SIDE OF A VAN ACCESSIBLE SPACE .
3. ALL DIMENSIONS ARE TO ℄ OF STRIPE UNLESS OTHERWISE INDICATED.
4. SEE SITE PLAN FOR ALL OTHER DIMENSIONS NOT INDICATED (± MIN).
5. SLOPE WITHIN ACCESSIBLE SPACES SHALL NOT EXCEED 2%.

ACCESSIBLE PARKING SYMBOL
LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING WHERE SPECIFIED

14 ADA ACCESSIBLE PARKING DETAIL
NOT TO SCALE



15 HEAVY DUTY CONCRETE PAVEMENT
NOT TO SCALE



16 CONCRETE WHEEL STOP
NOT TO SCALE

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NO.	DATE	DESCRIPTION
	06.26.2014	ISSUED FOR BUILDING PERMIT
1	05.28.2014	ISSUED FOR ADDENDUM NO. 1
	03.31.2014	CONTRACT PROGRESS SET
	07.17.2013	ISSUED FOR SITE PLAN REVIEW
	06.07.2013	ISSUED FOR 100% DD
	05.10.2013	ISSUED FOR 50% DD

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Oberlin, Ohio

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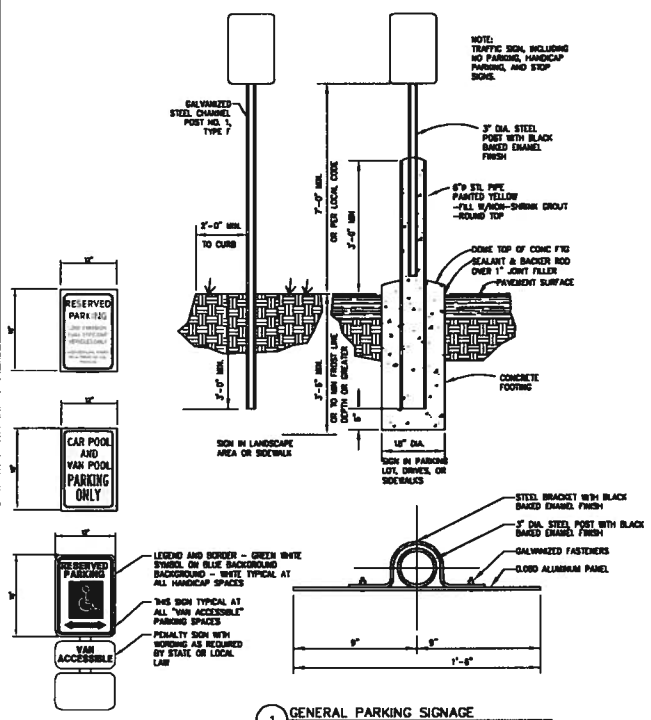
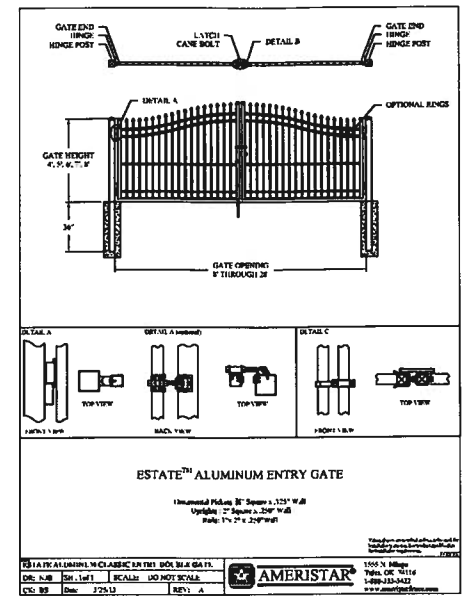
SITE DETAILS

Drawn By: JSO
Checked By: DJN
Project Number: 2012007
Sheet Number: C7.0



1 GENERAL PARKING SIGNAGE
NOT TO SCALE (FREESTANDING)



2 SWING GATE
NOT TO SCALE (FREESTANDING)

NOTES:
SURFACE TEXTURE:
TEXTURE OF CONCRETE SURFACES SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AND SHALL BE ROUGHER THAN ADJACENT WALK.

TRUNCATED DOMES:
INSTALL DETECTABLE WARNINGS (TRUNCATED DOMES) FOR A DISTANCE OF 24" FROM THE BACK OF THE CURB FOR THE ENTIRE WIDTH OF THE RAMP OPENING AS SHOWN ON DETAILS BELOW.

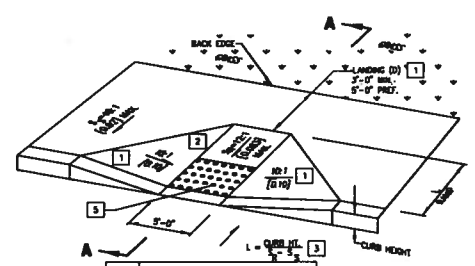
PAVERS SHALL MEET ASTM C 902 CLASS SX, TYPE 1, OR C 936, OR C 1272 TYPE R. ACCEPTABLE MANUFACTURERS AND PRODUCTS ARE:
1) WHITACRE–GREER FIREPROOFING COMPANY,
1400 S. WAYCROSS AVE, ALLIANCE, OH, 44601,(800) 992 PAVER
ADA PAVER, 4"X8"X2-1/4", CLEAR RED (RUSTIC) #30.
2) HANOVER ARCHITECTURAL PRODUCTS,
240 BENDER RD., HANOVER, PA. 17331, (717) 637-0500
DETECTABLE WARNING PAVER, 12"X12"X2" OR 24"X24"X3".
RED OR QUARRY RED.
3) ENDICOTT CLAY PRODUCTS,
PO BOX 17, FAIRBURY, NE. 68352, (402) 729-3064
HANDICAP DETECTABLE WARNING PAVER,
4"X8"X2-1/4", RED BLEND.

PAVERS SHALL BE PLACED ON TOP OF A 4" UNREINFORCED CONCRETE BASE. SETTING BED AND JOINTS TO BE MORTARED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION, OR WITH A MAXIMUM 1/2" THICK BED OF LATEX MODIFIED CEMENT MORTAR. MORTAR JOINTS TO A WIDTH NOT GREATER THAN 5/32" AND NOT LESS THAN 1/16". PAVERS SHALL NOT BE DIRECTLY TOUCHING EACH OTHER UNLESS THEY HAVE SPACING BARS.

MORTARED JOINTS ARE TO BE FLUSH WITH TOP SURFACE AND STRUCK SO AS TO GIVE A SMOOTH SURFACE. PAVERS SHALL BE LAID SUCH THAT JOINTS ARE LEVEL WITH ADJOINING JOINTS SO AS TO PROVIDE A SMOOTH TRANSITION FROM BRICK TO BRICK AND BRICK TO CONCRETE SURFACE.

THE SURFACE OF ANY TWO ADJACENT UNITS SHOULD NOT DIFFER BY MORE THAN 1/8" IN HEIGHT. BRICKS SHALL BE PLACED IN A RUNNING BOND PATTERN. FACE OF ALL BRICK SHALL BE CLEAN OF CEMENT AND PROTECTED SO AS TO AVOID CHIPPING DURING CONSTRUCTIONS.

EXPANSION JOINTS:
SHALL BE PROVIDED IN THE CURB RAMP AS EXTENSIONS OF WALK JOINTS AND CONSISTENT WITH ITEM 608.03 REQUIREMENTS FOR A NEW CONCRETE WALK. A 1/2" ITEM 705.03 EXPANSION JOINT FILLER SHALL BE PROVIDED AROUND THE EDGE OF RAMPS BUILT IN EXISTING CONCRETE WALK. LINES SHOWN ON THIS DRAWING INDICATE THE RAMP EDGE AND SLOPE CHANGES AND ARE NOT NECESSARILY JOINT LINES.



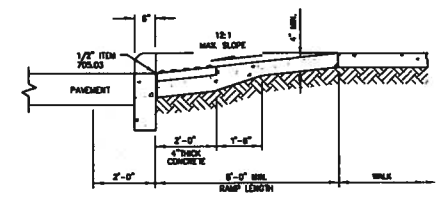
STREET SLOPE	RAMP LENGTH @ 1"/FT [0.083]		
	L LOW SIDE *		L HIGH SIDE *	
0.01	X'-0"	(1.8 M)	X'-10"	(3.1 M)
0.02	X'-10"	(1.5 M)	X'-11"	(3.4 M)
0.03	X'-9"	(1.3 M)	X'-2"	(2.9 M)
0.04	X'-1"	(1.2 M)	11'-8"	(3.6 M)
0.05	X'-8"	(1.1 M)	10'-2"	(4.6 M)

* MEASURED ALONG THE BACK OF A 8" [150] HIGH CURB.

L_{HIGH} = CURB HT. / 0.083 − STREET SLOPE 4

L_{LOW} = CURB HT. / 0.083 + STREET SLOPE 4

3 CURB RAMP
NOT TO SCALE (FREESTANDING)



SECTION A-A

LEGEND:
1 WHERE LANDING WIDTH (D) HAS BEEN REDUCED TO 3'-0" THE FLARED SIDES SHALL HAVE A MAXIMUM SLOPE OF 12:1 [0.083].

2 THE SLOPE OF THE RAMP TOWARD THE CURB IS PREFERRED TO BE 12:1 [0.083] OR FLATTER RELATED TO THE HORIZONTAL, BUT THE MAXIMUM SLOPE SHALL BE 12:1 [0.083] RELATIVE TO THE EXISTING OR PROPOSED WALK SLOPE.

IN EXISTING SIDEWALKS, WHERE THE MAXIMUM RAMP SLOPE( ) IS NOT FEASIBLE, IT MAY BE REDUCED AS FOLLOWS:
A) 10:1 [0.10] FOR A MAX. RISE OF 8"
B) 8:1 [0.125] FOR A MAX. RISE OF 3"

3 THE MINIMUM LENGTH OF A PERPENDICULAR RAMP IS 5' FROM THE BACK OF A 6" CURB AND MAY BE INCREASED WHERE FEASIBLE TO OBTAIN A FLATTER RAMP SLOPE OR TO BETTER BLEND WITH THE WALK CONFIGURATION.

4 DIMENSIONS DERIVED BY EQUATION ARE NOMINAL. CONSTRUCT RAMPS TO MEET REQUIRED SLOPES AND EXISTING CONDITIONS.

5 DETECTABLE WARNINGS (TRUNCATED DOMES) ARE TO BE INSTALLED IN THE LOCATION SHOWN. DIMENSIONS OF THE DOMES ARE 24" FROM THE BACK OF THE CURB BY THE WIDTH OF THE RAMP.

GENERAL NOTES:
1. EXCAVATION PERMIT REQUIRED: A CITY OF OBERLIN STREET EXCAVATION PERMIT IS REQUIRED FOR ALL EXCAVATIONS WITHIN THE PUBLIC RIGHT-OF-WAY, SET FORTH BY CITY OF OBERLIN CODE, CHAPTER 903 AND ISSUED IN ACCORDANCE WITH PROVISIONS IN THE PUBLIC WORKS STANDARDS. A PERMIT SHALL BE OBTAINED FOR ALL UTILITY INSTALLATIONS WITHIN THE PUBLIC RIGHT-OF-WAY LIMITS 48 HOURS BEFORE CONSTRUCTION.

SCOPE OF WORK:
2. THIS WORK SHALL CONSIST OF PAVEMENT REMOVAL, NECESSARY EXCAVATION, AND PAVEMENT REPLACEMENT IN ACCORDANCE WITH THE DETAILS SHOWN HEREIN. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF OBERLIN PUBLIC WORKS STANDARDS.

PROCEDURES USED FOR THE PAVEMENT REMOVAL AND REPLACEMENT SHALL NOT CAUSE SPALLING, CRACKING, OR OTHER DISTURBANCE TO ADJACENT PAVEMENT.

WHEN THE PAVEMENT HAS BEEN REMOVED AND THE CONTRACTOR IS UNABLE TO COMPLETE THE REQUIRED REPLACEMENT IN TIME FOR IT TO BE OPENED TO TRAFFIC AS INDICATED ON THE PERMIT, THE EXCAVATION SHALL BE FILLED WITH A PATCH MATERIAL WITH A DURABLE SURFACE OR PLATED. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN THESE PATCHES WHILE THEY ARE IN SERVICE. THE COST OF PLACING, MAINTAINING, REMOVING, AND DISPOSING OF THE TEMPORARY PATCHES OR PLATES WILL BE AT THE CONTRACTOR'S EXPENSE. PLATES SHALL NOT BE USED OR LEFT IN PLACE WHEN SNOWFALL IS EXPECTED.

CONTRACTOR CAN ELECT TO USE LOW DENSITY MORTAR BACKFILL (CDOT 613-1997 SPEC.) IN LIEU OF COMPACTED 304 AGGREGATE AT HIS EXPENSE WHERE THE HEREINAFTER NOTE 6 DOES NOT APPLY.

WHEN ITEM 613 LDMB IS USED AS A BACKFILL, NO PAVEMENT SHALL BE PLACED UNTIL BLEED WATER HAS BEEN EVAPORATED FROM THE CDF SURFACE OR HAS BEEN DRAINED OR REMOVED FROM THE SURFACE.

THE BACKFILLING, PAVEMENT REPAIR AND/OR THE HEAT WELDING SHALL BE DONE BY THE CONTRACTOR OR PERMITTED IN ACCORDANCE WITH CITY SPECIFICATIONS. IF DESIRED ANY OR ALL OF THIS WORK CAN BE PERFORMED BY THE CITY OF OBERLIN. THE CITY SHALL COLLECT APPROPRIATE FEES AT THE TIME THE PERMIT IS ISSUED FOR SAID WORK.

3. EACH SEPARATE PAVING RESTORATION AREA CLASSED AS EITHER LARGE OR SMALL AREA FOR PURPOSES OF REPAIR/REPLACEMENT WORK SCOPE.

SMALL PAVEMENT RESTORATION AREAS SHALL BE THOSE AREAS THAT ARE SIX (6) FEET OR LESS IN WIDTH AND ONE HUNDRED (100) FEET OR LESS IN LENGTH.

LARGE PAVEMENT RESTORATION AREAS SHALL BE THOSE AREAS THAT ARE GREATER THAN SIX (6) FEET IN WIDTH AND/OR GREATER THAN ONE HUNDRED (100) FEET IN LENGTH.

LARGE PAVEMENT RESTORATION AREAS SHALL BE RESTORED IN GENERAL ACCORD WITH ONE OF THE ABOVE PAVEMENT REPAIR TYPES (A THRU H) EXCEPT THAT THE PAVEMENT WIDTH SHALL BE INCREASED. THE INCREASED WIDTH SHALL BE THE LESSER OF ELEVEN (11) FEET OR ONE-HALF THE STREET PAVEMENT WIDTH. THE UNEXCAVATED WIDTH OF THE PAVEMENT REPAIR SHALL BE PLANED THE ENTIRE LENGTH OF THE PAVEMENT RESTORATION AND SHALL BE REPAVED WITH A PAVER. THE PAVEMENT PLANING DEPTH SHALL BE THE GREATER OF TWO (2) INCHES OR THE EXISTING WEARING COURSE THICKNESS.

IN THE EVENT THE PAVEMENT REPAIR TYPE IS NOT DECLARED ON THE CONSTRUCTION PLANS AND/OR IN THE BID/CONSTRUCTION PROPOSAL, THE PAVEMENT REPAIR TYPE MOST CLOSELY REPRESENTING THE DISTURBED/REMOVED PAVEMENT SHALL BE SELECTED AND PERFORMED. IN THE EVENT THE DISTURBED/REMOVED PAVEMENT IS DETERMINED TO NOT RESEMBLE ONE OF THE ABOVE PAVEMENT REPAIR TYPES, THE PUBLIC WORKS DIRECTOR OR HIS AUTHORIZED REPRESENTATIVE SHALL DETERMINE THE PAVEMENT REPAIR TYPE TO BE USED.

ALL PAVEMENT RESTORATION JOINTS SHALL BE SEALED IN ACCORD WITH CDOT 413 CRACK SEALING.

MARKING OF UTILITY PAVEMENT CUTS:
4. THE MINIMUM THICKNESS OF TOTAL PAVEMENT RESTORATION SHALL MATCH EXISTING TOTAL PAVEMENT THICKNESS.

5. SPECIAL NOTES:
A. FOR TYPE C AND TYPE H3 CUT REPAIRS, THE AREA TO BE RESTORED IS TO INCLUDE THE CUT AND TWELVE (12) INCHES BEYOND EACH SIDE OF THE CUT FOR A NOMINAL DEPTH OF TWO INCHES.

B. FOR TYPE C AND TYPE H3 PAVEMENT REPAIR THE ITEM 404 HOT ASPHALT OR COLD MIX SHALL BE PLACED IN LIFTS NOT EXCEEDING THREE INCHES AND COMPACTED WITH A COMBINATION VIBRATORY PLATE COMPACTOR EQUIPMENT, OR A VIBRATORY STEEL WHEELED ROLLER WITH A MINIMUM CENTERED FORCE OF 2000 POUNDS. IN ALL CASES THE SURFACE LIFT SHALL BE COMPACTED WITH THE VIBRATORY STEEL WHEELED ROLLER.

C. COLD IS SHALL BE HPM COLD IS OR OTHER COLD MIX APPROVED BY THE CITY OF OBERLIN. IN LIEU OF COLD MIX THE CONTRACTOR MAY STOCKPILE 404 ASPHALT AND REHEAT IT TO PLACE IN CUT AND PAVEMENT REPAIR. TYPE H2 PAVEMENT REPLACEMENT SHALL CONSIST OF FULL DEPTH HPM COLD MIX FOR SMALL EXCAVATIONS. LARGE EXCAVATIONS SHALL REQUIRE A MINIMUM OF SEVEN (7) INCHES OF FAST SETTING PORTLAND CEMENT AND TWO (2) INCHES OF HPM COLD MIX.

D. THE TOP TWO (2) INCHES OF THE EXISTING COLD MIX IS TO BE REPLACED WITH ITEM 404 ASPHALT WHICH IS TO BE HEAT-WELDED AS SET FORTH IN NOTE "G". THIS WORK SHALL BE PERFORMED AS SOON AS POSSIBLE IN THE SPRING OWCE HOT ASPHALT IS AVAILABLE.

E. CONCRETE BASE RESTORATION
1. OPEN TO TRAFFIC AFTER 4 HOURS USE CDOT 499 CLASS FS (FAST SETTING PORTLAND CEMENT CONCRETE IN THE FOLLOWING LOCATIONS:
MAIN STREET (S.R. 58)
LORAIN STREET (S.R. 511)
2. OPEN TO TRAFFIC AFTER 24 HOURS ALL OTHER LOCATIONS EXCEPT DRIVE APRONS AND WALKS.
3. DRIVE APRONS AND WALKS
a. DRIVE APRONS TO BE CDOT 451.
b. WALKS CROSSING DRIVE APRONS TO BE CDOT 451.
c. WALKS NOT CROSSING DRIVE APRONS TO BE CDOT 608.

F. THE TRENCH WIDTH FOR SMALL PIPES AND CONDUITS SHALL BE OF SUFFICIENT WIDTH TO ALLOW FOR PROPER PLACEMENT OF THE BACKFILL MATERIAL. THE PAVEMENT PORTION OF THE TRENCH SHALL BE A MINIMUM OF 2'-0" IN WIDTH. THIS IS TO ALLOW FOR PROPER COMPACTION OF THE ASPHALT PAVEMENT. IF THE TRENCH FOR PLACING THE CONDUIT IS NARROWER THAN 2' THEN THE PAVEMENT PORTION SHALL BE CUT BACK TO PROVIDE THE 2'-0" MINIMUM FOR PAVING OPERATIONS.

G. WHEN USING LDMB, THE OPTIONAL FILL AREA OVER THE CONDUIT MAY BE BACKFILLED WITH SAND, GRANULAR MATERIAL, OR OTHER SUITABLE SOIL MATERIAL FOR A DISTANCE NOT TO EXCEED 1'-0'. A PROTECTIVE BARRIER OF WOVEN OR SIMILAR MATERIAL IS PERMITTED.

H. REPAIR OF BRICK STREETS:
1. BRICKS REMOVED FROM A REPAIR AREA SHALL BE STORED IN A SAFE PLACE, BY THE CONTRACTOR FOR REUSE. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING ANY BRICKS THAT ARE STOLEN OR DAMAGED, AT NO ADDITIONAL COST TO THE CITY.

2. BRICKS MAY BE PURCHASED FROM THE CITY AT A NOMINAL COST TO THE CONTRACTOR. IF BRICKS ARE SUPPLIED BY THE CONTRACTOR, THEY MUST FIRST BE APPROVED BY THE CITY BEFORE THEY ARE USED.

3. SANCUTTING ALL PARTIAL BRICKS SHALL BE SANCUT. FURTHER, NO BRICK WILL BE PERMITTED TO BE CUT, FOR REPLACEMENT, TO A LENGTH LESS THAN ONE-HALF OF ITS ORIGINAL LENGTH. THIS MAY REQUIRED SANCUTTING OF ADJACENT UNDISTURBED BRICK(S).

4. THE PERIMETER FACES OF THE EXISTING BASE MATERIAL SHALL BE CUT BACK TO AS NEARLY A VERTICAL ORIENTATION AS POSSIBLE. IF SHEARING OF THE ADJACENT BASE RESULTS, THE CONTRACTOR WILL BE PAID FOR THE ADDITIONAL AREAS OF REMOVAL AS DESCRIBED ON THE ATTACHED DETAIL SHEET.

5. THE MAXIMUM WIDTH OF A BRICK MORTAR JOINT SHALL BE 1/2". THIS RESTRICTION WILL ALSO APPLY TO THE ALLOWABLE BASE. MATERIAL SHALL BE DETERMINED BY THE TRENCH SIZE AS APPLICABLE FOR SMALL OR LARGE EXCAVATIONS, AS SPECIFIED ON PAGE 3 OF 6.

6. MORTARING OF JOINTS: ALL JOINTS SHALL BE MORTARED WITH A 50/50 MIXTURE BY VOLUME OF SAND/CEMENT, SO AS TO PROVIDE FOR A FLUSH FINISH. THIS MAY REQUIRE MORE THAN ONE APPLICATION. FURTHER, MECHANICAL VIBRATION WILL BE REQUIRED FOR CONSOLIDATION OF DRY MORTAR MIX.

JOINT FORMED ADJACENT TO THE PERIMETER OF A REPAIR AREA, WHERE THE NOMS MAY NOT BE PARALLEL TO ONE ANOTHER.

I. FOR ALLEY REPAIRS, THE PROPOSED PAVEMENT REPLACEMENT SHALL CONFORM TO THE EXISTING TYPE AND THICKNESS OF THE PAVEMENT. CHIP AND SEAL TYPE ALLEYS SHALL REQUIRE MATCHING THE EXISTING THICKNESS OF PAVMENT WITH THE APPROPRIATE COMBINATION OF MATERIALS BASED ON THREE (3) INCHES OF 404 ASPHALT. FINISH CONCRETE PAVEMENT IS NOT PERMITTED. MATERIALS USED SHALL CONFORM TO THE REQUIREMENT OF THE CURRENT CMSE.

IF MORE THAN 1/2 OF THE WIDTH OF AN ALLEY IS REMOVED, THE PAVEMENT SHALL BE REPLACED AS PER TYPICAL AND THEN OVERLAID OVER THE TOTAL WIDTH OF PAVEMENT AND LENGTH OF TRENCH WITH A FEATHER.

J. DESIGNATION OF PAVEMENT RESTORATION TYPES "D", "I", AND "F" WILL OCCUR AS DETERMINED IN THE FUTURE.

6. LOW DENSITY MORTAR BACKFILL (CDOT 613-1997 SPEC.)

A. LOW DENSITY MORTAR BACKFILL (CDOT 613-1997 SPEC.) SHALL BE USED AS TRENCH (EXCAVATION) BACKFILL BENEATH VEHICULAR TRAFFIC BEARING PAVEMENTS IN THE FOLLOWING LOCATIONS:
MAIN STREET (S.R. 58)
LORAIN STREET (S.R. 511)
COLLEGE STREET

B. LOW DENSITY MORTAR BACKFILL (CDOT 613-1997 SPEC.) SHALL BE USED AS TRENCH (EXCAVATION) BACKFILL BENEATH VEHICULAR TRAFFIC BEARING PAVEMENTS IN OTHER STREETS AS SPECIFICALLY DIRECTED IN PROJECT SPECIFIC CONSTRUCTION DOCUMENTS. CHANGES FROM COMPACTED 304 GRANULAR TO 613 NOT CALLED FOR IN SUCH DOCUMENTS SHALL BE NEGOTIATED WITH ACCOUNT TAKEN FOR MATERIAL AND PLACEMENT AND OTHER AFFECTED CONSTRUCTION COSTS RESPECTIVE TO USE EACH MATERIAL.

4 SURFACE RESTORATION STANDARDS – 2 OF 2
NOT TO SCALE (CITY OF OBERLIN DETAIL, DATED 03/23/2012)

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NO.	DATE	DESCRIPTION
	09.26.2014	ISSUED FOR BUILDING PERMIT
1	09.26.2014	ISSUED FOR ADDENDUM NO. 1
	03.31.2014	CONTRACT PROGRESS SET
	07.17.2013	ISSUED FOR SITE PLAN REVIEW
	06.07.2013	ISSUED FOR 100% DD
	05.10.2013	ISSUED FOR 50% DD

OBERLIN COLLEGE GATEWAY BUILDING

Oberlin, Ohio

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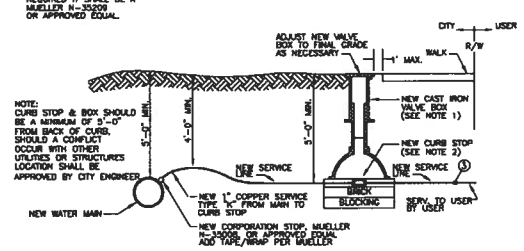
SITE DETAILS

Drawn By: JSO
Checked By: DJH
Project Number: 2012007
Sheet Number: C7.1

SERVICE CONNECTION

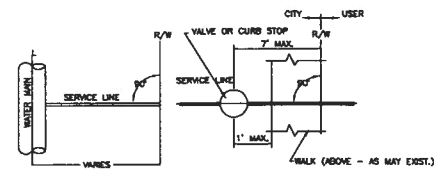
(APPLIES TO NEW/ REPLACEMENT/ RECONNECT)

NOTES:
1. IF NEW VALVE BOX IS REQUIRED, IT SHALL BE A BUFFALO TYPE "C" EXTENSION THREE PIECE CAST IRON SCREW TYPE VALVE BOX.
2. IF NEW CURB STOP IS REQUIRED IT SHALL BE A MUELLER H-10320 OR APPROVED EQUAL.
3. RECONNECT FITTING 1" x USER LINE SIZE/TYPE AS NEEDED RELO - DETERMINED/CONFIRMED DURING CONSTRUCTION
4. SERVICE CONNECTIONS LARGER THAN 1 THROUGH 2" SIMILAR CONFIGURATION.



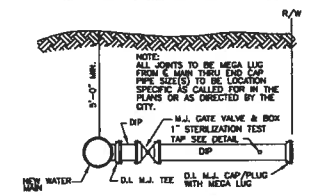
1 WATER SERVICE CONNECTION
NOT TO SCALE (CITY OF OBERLIN DETAIL)

ORIENTATION OF SERVICE LINES



2 OPERATION OF WATER SERVICE LINES
NOT TO SCALE (CITY OF OBERLIN DETAIL)

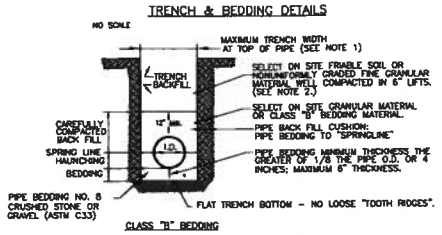
INDUSTRIAL/COMMERCIAL SERVICE TAP



3 INDUSTRIAL/COMMERCIAL WATER SERVICE TAP
NOT TO SCALE (CITY OF OBERLIN DETAIL)

TRENCH & BEDDING DETAILS

NO SCALE



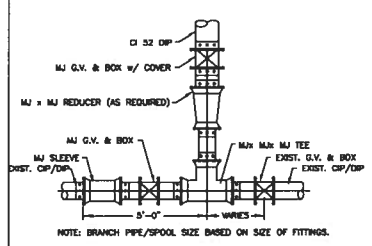
CLASS "B" BEDDING

TRENCH AND BEDDING NOTES

1. MAXIMUM TRENCH WIDTH AT TOP OF PIPE SHALL BE O.D. PLUS 24" FOR ALL PIPE SIZES UP TO AND INCLUDING 24" I.D. AND O.D. PLUS 30" FOR PIPE SIZES LARGER THAN 24" I.D. (I.D./O.D. APPLIES TO PIPE BARREL).
2. PIPE AND TRENCH BACK FILL UNDER PAVEMENT AND STRUCTURES SHALL BE ODOT 304 LIMESTONE COMPACTED TO TOP OF TRENCH. THE BACKFILL MATERIAL SHALL EXTEND ALONG THE PIPE CENTERLINE A MINIMUM OF 3 FEET BEYOND EACH EDGE OF PAVEMENT THE TRENCH CROSSES. IN AREAS OUTSIDE OF PAVEMENT, SELECT ON-SITE GRANULAR MATERIAL APPROVED BY THE ENGINEER MAY BE USED IN LIFTS NOT TO EXCEED 6" FOR PIPE BACK FILL ABOVE BEDDING.
3. ALL BEDDING SHALL BE CLASS "B" UNLESS OTHERWISE NOTED ON THE PLANS OR AUTHORIZED BY THE ENGINEER.
4. SLAG BEDDING SHALL NOT BE USED.
5. CLASS "B" BEDDING AS ILLUSTRATED IS COMPARABLE TO AWWA C150/C900. TYPE 5 MODIFIED TO INCLUDE 12" BACK FILL CUSHION OVER TOP OF PIPE. THERE SHALL BE NO SHAPED TRENCH BOTTOM.
6. CLASS "B" BEDDING AS ILLUSTRATED IS COMPARABLE TO ASCE CLASS "B". THERE SHALL BE NO SHAPED TRENCH BOTTOM.
7. ALL BEDDING TO BE CAREFULLY COMPACTED SO AS TO FULLY SUPPORT THE HAUNCH AREA OF THE PIPE.
8. PIPE BEDDING AND PIPE BACK FILL CUSHION TO MEET APPROXIMATE 90 PERCENT STANDARD PROCTOR, AASHTO T-99.
9. CLAY DAMS SHALL BE REQUIRED WHEN AND WHERE NECESSARY PER THE SOLE DISCRETION OF THE ENGINEER.
10. CUT EXISTING PAVEMENT AT TRENCH WIDTH DURING EXCAVATION. AFTER BACKFILLING TRENCH, OVERCUT 1' FROM TRENCH FOR TRENCH CAP TO BE CONSTRUCTED. TRENCH CAP TO BE CONSTRUCTED ON UNDISTURBED SOIL. FOR TYPE "B" RESTORATION AN ADDITIONAL CUT THROUGH THE DEPTH OF THE ASPHALT IS REQUIRED PER THE DETAIL.
11. SEE SURFACE RESTORATION PAGE 2 OF 2 REGARDING LOW DENSITY MORTAR BACKFILL.

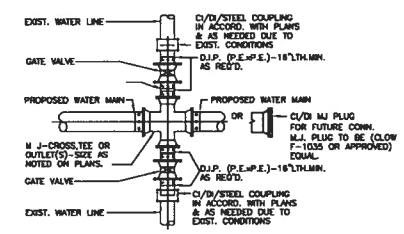
4 WATERLINE TRENCH & BEDDING
NOT TO SCALE (CITY OF OBERLIN DETAIL)

WATERLINE TIE-INS TYPICAL PROCEDURES



NOTE: BRANCH PIPE/SPOOL SIZE BASED ON SIZE OF FITTINGS.

METHOD "A-1" - W/TEE



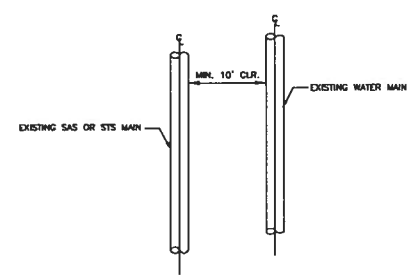
METHOD "A-2" - W/CROSS

METHOD "A"

TIE-IN WITH NEW AND EXISTING CONSTRUCTION AT SAME ELEVATION

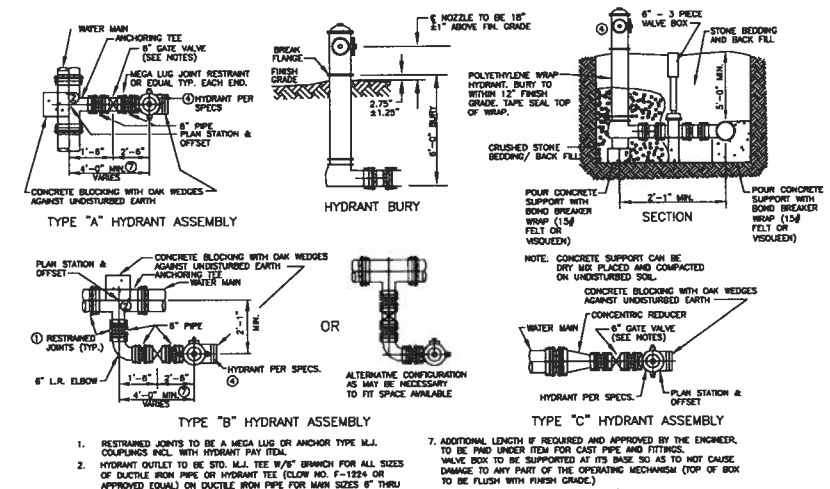
1. THE TIE-IN METHODS SHOWN HERE-ON ARE INTENDED TO SHOW THE GENERAL SCHEMATICS OF PROBABLE ALTERNATIVES FOR CONNECTION OF NEW CONSTRUCTION. EXPECT VARIANCES FROM THE ILLUSTRATIONS DUE TO ACTUAL PLAN CALLS &/OR DUE TO EXISTING CONSTRUCTION OR OBSTRUCTIONS ENCOUNTERED DURING CONSTRUCTION.
2. ALL NOTES WITH EACH TIE-IN PIPING ILLUSTRATIONS SHALL BE CONSIDERED APPLICABLE TO ALL OTHER ILLUSTRATIONS AS MAY BE NECESSARY IN RESPONSE TO SITE CONDITIONS.
3. REMOVE EXISTING EXISTING WATER MAIN SECTIONS AS MAY BE NECESSARY TO INSTALL NEW TIE-IN & APPURTENANCES THERETO.
4. ALL NEW TIE-IN PIPE & FITTINGS TO BE POLYETHYLENE WRAPPED AS PART OF ITEM FOR PIPE SIZE USED.
5. MEGALUGS OR EQUIVALENT SHALL BE USED TO RESTRAIN ALL NEW TIE-IN PIPING AND ATTACHMENTS TO EXISTING PIPING
6. SEE "ADMT RESTRAINT CHART" FOR THE LENGHT(S) TO BE RESTRAINED.
7. CLOSURE OF EXISTING PIPES:
   a.) IF EXISTING PIPE CUT IS STILL TO REMAIN IN SERVICE CAP OR PLUG PIPE WITH APPROPRIATE FITTING AND THRUST RESTRAIN WITH THRUST BLOCK OF CONCRETE. ANCHOR COLLAR BEARING AGAINST UNDISTURBED SOIL.
   b.) IF EXISTING PIPE IS TO BE RETIRED AND LEFT IN-PLACE FILL & ENCASE OPEN ENDS WITH CONCRETE CLOSURE TO SEAL PIPE.
8. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR MAKING ALL NECESSARY ARRANGEMENTS WITH ALL UTILITY COMPANIES IN ACCORD WITH THE CONTRACT DOCUMENTS.

MINIMUM HORIZONTAL W/L CLEARANCE



5 WATER CONNECTION PROCEDURES - METHOD A
NOT TO SCALE (CITY OF OBERLIN DETAIL)

HYDRANT ASSEMBLY DETAIL



1. RESTRAINED JOINTS TO BE A MEGA LUG OR ANCHOR TYPE M.J. COUPLINGS INCL. WITH HYDRANT PAY ITEM.
2. HYDRANT OUTLET TO BE STD. M.J. TEE 9/8" BRANCH FOR ALL SIZES OF DUCTILE IRON PIPE OR HYDRANT TEE (CLOW NO. F-1924 OR APPROVED EQUAL) ON DUCTILE IRON PIPE FOR MAIN SIZES 6" THRU 12" DIA. STD. M.J. TEE 9/8" BRANCH ON DUCTILE IRON PIPE REQUIRED FOR MAIN SIZES 16" AND LARGER.
3. 90° TO BE STD. 6"MJ DI BEND OR ANCHORING ELBOW (CLOW F-1218).
4. HYDRANT TO BE IN ACCORDANCE WITH SPECIFICATIONS.
5. THE STD. HYD. BURY IS 6'-0"; HOWEVER, TO MEET THE SPECIFIED AND ILLUSTRATED MAIN COVER AND HYD. SETTINGS RESPECTIVE TO EACH HYDRANT LOCATION, IT WILL BE NECESSARY TO INSTALL A HYD. BURY THAT IS COMMENSURATE WITH THE HYDRANT SITE REQUIREMENTS. IN EACH SUCH CASE, THE CONTRACTOR SHALL PROVIDE, AS A PART OF HYD. ITEM INVOLVED, A LENGTHENED OR SHORTENED HYD. BURY, AS NECESSARY TO ACHIEVE PROPER ASSEMBLY.
6. HYDRANT DRAINS SHALL NOT BE PLUGGED. A 10 CUBIC FOOT GRAVEL POCKET (NO. 67 STONE) SHALL BE PROVIDED.
7. ADDITIONAL LENGTH IF REQUIRED AND APPROVED BY THE ENGINEER, TO BE PAID UNDER ITEM FOR CAST PIPE AND FITTINGS. VALVE BOX TO BE SUPPORTED AT ITS BASE SO AS TO NOT CAUSE DAMAGE TO ANY PART OF THE OPERATING MECHANISM (TOP OF BOX TO BE FLUSH WITH FINISH GRADE.)
8. GRADELOCK (PROVIDED BY CONTRACTOR) MAY BE USED TO ADJUST VERTICAL HYDRANT SETTING.
9. THE HYDRANT PUMPER NOZZLE SHALL BE OF ONE-PIECE DESIGN, COMPATIBLE WITH 5" STORZ "QUICK DISCONNECT" HOSE COUPLING AND SHALL BE FURNISHED COMPLETE WITH CAP AND SECURITY TETHER (STAINLESS STEEL CHAIN OR 0.25" DIAMETER STAINLESS STEEL CABLE). THE NOZZLE SHALL BE AN INTEGRAL PART OF THE FIRE HYDRANT AND MUST BE FURNISHED BY THE MANUFACTURER OR AUTHORIZED DISTRIBUTOR DESIGNATED BY THE MANUFACTURER. STORZ ADAPTERS WILL NOT BE ACCEPTED. STORZ CONNECTOR SHALL BE COMPLIANT WITH NFPA 1963 HOSE CONNECTION STANDARD INCLUDING THE LATEST REVISION THERETO AND IT SHALL NOT HULLIFY COMPLIANCE OF THE HYDRANT TO AWWA C503 INCLUDING THE LATEST REVISION THERETO.

6 HYDRANT ASSEMBLY
NOT TO SCALE (CITY OF OBERLIN DETAIL)

WATER DISTRIBUTION MATERIAL SPECIFICATIONS

FIRE HYDRANTS: FIRE HYDRANTS SHALL BE MANUFACTURED BY THE MUELLER COMPANY AND REFERRED TO AS THE "CENTURION A 423". THE HYDRANTS SHALL HAVE A 8 INCH MECHANICAL JOINT INLET CONNECTION, A 3 1/4 INCH MAIN VALVE OPENING, TWO 2 1/2 INCH HOSE NOZZLES AND ONE 5 INCH PUMPER NOZZLE. ALL OUTLET NOZZLES SHALL HAVE MALE THREADS OF BRONZE AND SHALL BE NATIONAL (AMERICAN) STANDARD THREADS. HYDRANTS SHALL BE FURNISHED SHALL BE FURNISHED FOR CORRECT TRENCH DEPTH. FIRE HYDRANTS SHALL BE RATED A MINIMUM OF 200 PSI WORKING PRESSURE AND 400 PSI TEST PRESSURE. HYDRANTS SHALL BE PAINTED (CITY STANDARD YELLOW).

GATE VALVES: GATE VALVES SHALL BE MANUFACTURED BY MUELLER COMPANY AND REFERRED TO AS THE "A-2360-20 RESILIENT SEAT WEDGE GATE VALVE". THE VALVES SHALL OPEN TURNING COUNTERCLOCKWISE. ALL VALVES SHALL HAVE OPENINGS THROUGH THE BODY OF THE SAME CIRCULAR AREA AS THAT OF THE PIPE TO WHICH THEY ARE ATTACHED. VALVES SHALL HAVE MECHANICAL JOINT ENDS.

TAPPING VALVES: TAPPING VALVES SHALL BE MANUFACTURED BY THE MUELLER COMPANY AND REFERRED TO AS "RESILIENT SEAT WEDGE GATE VALVE". THE VALVES SHALL ALSO OPEN COUNTERCLOCKWISE.

PIPE AND FITTINGS: PIPE MATERIAL SHALL BE AWWA C-150 CLASS 52 DUCTILE IRON. FITTINGS SHALL BE DUCTILE IRON CLASS 350, CEMENT LINED, WITH MECHANICAL JOINTS FURNISHED WITH GASKETS AND BOLTS LESS GLANDS AND SECURED WITH MEGA LUG RETAINING GLANDS. ALL PIPE SHALL HAVE INSTALLED LOCATE WIRE AND WATER LINE BELOW RIBBON. WIRE SHALL BE PLACED OR ATTACHED TO THE MIDDLE OF THE PIPE.

TAPPING SADDLE: TAPPING SADDLES SHALL BE IRON BODY MUELLER OR FAST STYLE. FAST STYLE SLEEVES SHALL BE MADE OF STAINLESS STEEL WITH A STAINLESS STEEL OR CARBON STEEL FLANGE WITH SUFFICIENT O.D. RANGE TO BE INSTALLED ON AC PIPE.

VALVE BOXES: ALL TWO PIECE SCREW TYPE VALVE BOXES SHALL BE 5 1/4 INCH AND OF SUCH LENGTH NECESSARY TO EXTEND VALVES TO FINISH GRADE.

COVERS SHALL BE MARKED "WATER".
ALL THREE PIECE SCREW TYPE VALVE BOXES SHALL BE 5 1/4 INCH AND OF SUCH LENGTH TO EXTEND A 12 INCH VALVE TO FINISH GRADE. ALL VALVE BOX

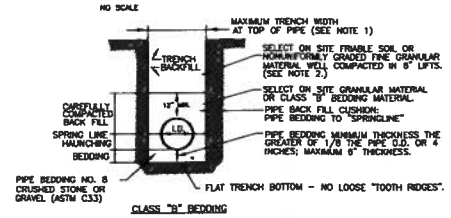
ALL PIPE FITTINGS, VALVES AND SPECIALS SHALL BE POLYETHYLENE WRAPPED PER AWWA C105/ANSI 21.5-99 STANDARD FOR POLYETHYLENE ENCASEMENT FOR DIP SYSTEMS.

THE VARIOUS SPECIFICATIONS CONTAINED IN THE PLANS (INCLUDING DETAILS) SHALL BE REGARDED AS SUPPLEMENTAL TO THE CITY OF OBERLIN, PUBLIC WORKS STANDARDS, STANDARD CONSTRUCTION AND MATERIAL SPECIFICATIONS, DIVISION 2.

7 MISCELLANEOUS WATER LINE NOTES
NOT TO SCALE (CITY OF OBERLIN DETAIL)

TRENCH & BEDDING DETAILS

NO SCALE



CLASS "B" BEDDING

TRENCH AND BEDDING NOTES

1. MAXIMUM TRENCH WIDTH AT TOP OF PIPE SHALL BE O.D. PLUS 24" FOR ALL PIPE SIZES UP TO AND INCLUDING 24" I.D. AND O.D. PLUS 30" FOR PIPE SIZES LARGER THAN 24" I.D. (I.D./O.D. APPLIES TO PIPE BARREL).
2. PIPE AND TRENCH BACK FILL UNDER PAVEMENT AND STRUCTURES SHALL BE ODOT 304 LIMESTONE COMPACTED TO TOP OF TRENCH. THE BACKFILL MATERIAL SHALL EXTEND ALONG THE PIPE CENTERLINE A MINIMUM OF 3 FEET BEYOND EACH EDGE OF PAVEMENT THE TRENCH CROSSES. IN AREAS OUTSIDE OF PAVEMENT, SELECT ON-SITE GRANULAR MATERIAL APPROVED BY THE ENGINEER MAY BE USED IN LIFTS NOT TO EXCEED 6" FOR PIPE BACK FILL ABOVE BEDDING.
3. ALL BEDDING SHALL BE CLASS "B" UNLESS OTHERWISE NOTED ON THE PLANS OR AUTHORIZED BY THE ENGINEER.
4. SLAG BEDDING SHALL NOT BE USED.
5. CLASS "B" BEDDING AS ILLUSTRATED IS COMPARABLE TO AWWA C150/C900. TYPE 5 MODIFIED TO INCLUDE 12" BACK FILL CUSHION OVER TOP OF PIPE. THERE SHALL BE NO SHAPED TRENCH BOTTOM.
6. CLASS "B" BEDDING AS ILLUSTRATED IS COMPARABLE TO ASCE CLASS "B". THERE SHALL BE NO SHAPED TRENCH BOTTOM.
7. ALL BEDDING TO BE CAREFULLY COMPACTED SO AS TO FULLY SUPPORT THE HAUNCH AREA OF THE PIPE.
8. PIPE BEDDING AND PIPE BACK FILL CUSHION TO MEET APPROXIMATE 90 PERCENT STANDARD PROCTOR, AASHTO T-99.
9. CLAY DAMS SHALL BE REQUIRED WHEN AND WHERE NECESSARY PER THE SOLE DISCRETION OF THE ENGINEER.
10. CUT EXISTING PAVEMENT AT TRENCH WIDTH DURING EXCAVATION. AFTER BACKFILLING TRENCH, OVERCUT 1' FROM TRENCH FOR TRENCH CAP TO BE CONSTRUCTED. TRENCH CAP TO BE CONSTRUCTED ON UNDISTURBED SOIL. FOR TYPE "B" RESTORATION AN ADDITIONAL CUT THROUGH THE DEPTH OF THE ASPHALT IS REQUIRED PER THE DETAIL.
11. SEE SURFACE RESTORATION PAGE 2 OF 2 REGARDING LOW DENSITY MORTAR BACKFILL.

8 SANITARY TRENCH & BEDDING
NOT TO SCALE (CITY OF OBERLIN DETAIL)

NOTE:
ALL SANITARY SEWER STRUCTURES (INCLUDING MANHOLES)

1. FLEXIBLE BOOT PIPE TO M.H. CONNECTIONS - DO NOT GROUT ANNULAR SPACE AROUND PIPE.
2. PIPE TO M.H. CONNECTIONS WITHOUT FLEXIBLE BOOT - GROUT ANNULAR SPACE AROUND EACH PIPE - INSIDE AND OUTSIDE OF M.H. WALL.
3. FLEXIBLE BOOT MAY BE CAST-IN BY PRECAST MFR. OR FIELD INSTALLED EXPANSION AGAINST O.D. OF PIPE OPEN IN M.H. WALL.
4. DO NOT USE CONCRETE BRICK TO ADJUST CASTING TO GRADE.
5. ALL CASTINGS ARE TO BE ADJUSTED TO GRADE USING EITHER MASONRY GRADE ADJUSTMENT OR POLYETHYLENE GRADE ADJUSTING RINGS.
6. MASONRY GRADE ADJUSTMENT SHALL BE IN THE RANGE 3" MIN. TO 12" MAX. AND SHALL BE CEMENT MORTAR PLASTER COATED (MIN. 1/2" INCH INSIDE & OUT).
7. ONE COURSE OF HARD CLAY OR SHALE BRICK MAY BE USED IN LIEU OF PRECAST CONCRETE RING FOR 3" GRADE ADJUSTMENT.
8. ALL PRECAST SECTIONS SHALL BE MANUFACTURED AND FURNISHED AS SOLID SECTIONS WITHOUT LIFT HOLES OF ANY KIND.
9. ALL STEPS ARE TO BE LINED UP IN SIDE AWAY FROM STREET CENTERLINE AND ARE NOT TO BE INLINE WITH PIPE IN OR OUT OF STRUCTURE.
10. CASTINGS AND GRADE RINGS TO BE SET WITH RESILIENT SEAL STRIP.
11. RESILIENT SEAL STRIP SHALL BE ECCO-SEAL, SYNCO-FLEX OR EQUIVALENT PRODUCT.

Length of Service Line @ 1.00%	Minimum Basement Floor Level Above Invert of Sanitary Sewer Main						
	Size of Main Sewer						
	8	10	12	15	18	21	24
25	3.75	4.00	4.25	4.63	5.00	5.38	5.75
50	4.00	4.25	4.50	4.88	5.25	5.63	6.00
75	4.25	4.50	4.75	5.13	5.50	5.88	6.25
100	4.50	4.75	5.00	5.38	5.75	6.13	6.50
125	4.75	5.00	5.25	5.63	6.00	6.38	6.75
150	5.00	5.25	5.50	5.88	6.25	6.63	7.00
175	5.25	5.50	5.75	6.13	6.50	6.88	7.25
200	5.50	5.75	6.00	6.38	6.75	7.13	7.50
225	5.75	6.00	6.25	6.63	7.00	7.38	7.75
250	6.00	6.25	6.50	6.88	7.25	7.63	8.00

Table is set up at 0.25' increments. Round the distance greater than the subset size, rounding to 0.00 to 0.25 of a foot greater depth.
Table is based on 6" Service Connection with "bend" or "wye" rotated up to 45 degrees, with inlend @ 1.00% and with the invert of the "inside end" being below the basement floor.

9 SANITARY STANDARD NOTES
NOT TO SCALE (CITY OF OBERLIN DETAIL)

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	05.28.2014	ISSUED FOR BUILDING PERMIT
1	05.30.2014	ISSUED FOR ADDENDUM NO. 1
	03.31.2014	CONTRACT PROGRESS SET
	07.17.2013	ISSUED FOR SITE PLAN REVIEW
	06.07.2013	ISSUED FOR 100% DD
	05.06.2013	ISSUED FOR 40% DD
NO.	DATE	DESCRIPTION

OBERLIN COLLEGE GATEWAY BUILDING

Oberlin, Ohio

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UTILITY DETAILS

Drawn By: JSO
Checked By: DJN
Project Number: 2012007
Sheet Number: C7.2

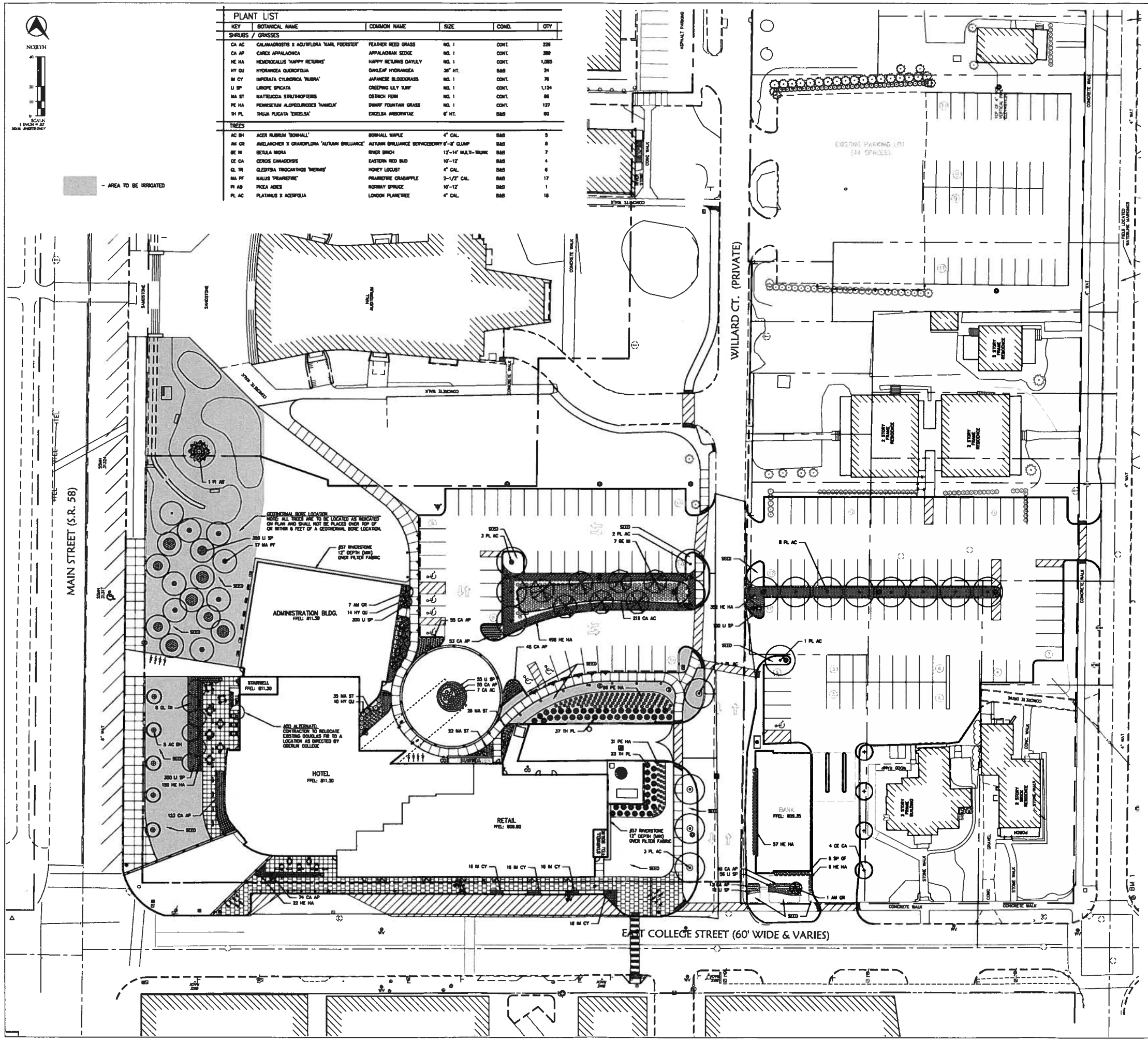
PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE	COND.	QTY
SHRUBS / GRASSES					
CA AC	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	NO. 1	CONT.	226
CA AP	CAREX APPALACHICA	APPALACHIAN SEDGE	NO. 1	CONT.	389
HE HA	HEMEROCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	NO. 1	CONT.	1,085
HY QU	HYDRANGEA QUERCIFOLIA	OAKLEAF HYDRANGEA	30" HT.	B&B	24
IM CY	IMPERATA CYLINDRICA 'RUBRA'	JAPANESE BLOODGRASS	NO. 1	CONT.	76
LI SP	LIRIOPE SPICATA	CREEPING LILY TURF	NO. 1	CONT.	1,124
MA ST	MATTEUCCIA STRUTHIOPTERIS	OSTRICH FERN	NO. 1	CONT.	86
PE HA	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	NO. 1	CONT.	127
IH PL	THUJA PLICATA 'EXCELSA'	EXCELSA ARBORVITAE	6' HT.	B&B	60
TREES					
AC BH	ACER RUBRUM 'BOWHALL'	BOWHALL MAPLE	4" CAL.	B&B	3
AM GR	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	6'-8' CLUMP	B&B	8
BE NI	BETULA NIGRA	RIVER BIRCH	12'-14' MULTI-TRUNK	B&B	7
CE CA	CERCIS CANADENSIS	EASTERN RED BUD	10'-12'	B&B	4
GL TR	GLEDITSIA TRIACANTHOS 'INERMIS'	HONEY LOCUST	4" CAL.	B&B	6
MA PF	MALUS 'PRAIRIEFIRE'	PRAIRIEFIRE CRABAPPLE	2-1/2" CAL.	B&B	17
PI AB	PICEA ABIES	NORWAY SPRUCE	10'-12'	B&B	1
PL AC	PLATANUS X ACERIFOLIA	LONDON PLANETREE	4" CAL.	B&B	18

NORTH

SCALE: 1 INCH = 20' (22x36 SHEETS ONLY)

- AREA TO BE IRRIGATED



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	03.26.2014	ISSUED FOR BUILDING PERMIT
1	03.26.2014	ISSUED FOR ADDENDUM NO. 1
	03.31.2014	CONTRACT PROGRESS SET
	07.17.2013	ISSUED FOR SITE PLAN REVIEW
	06.07.2013	ISSUED FOR 100% DD
	06.10.2013	ISSUED FOR 50% DD

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Oberlin, Ohio

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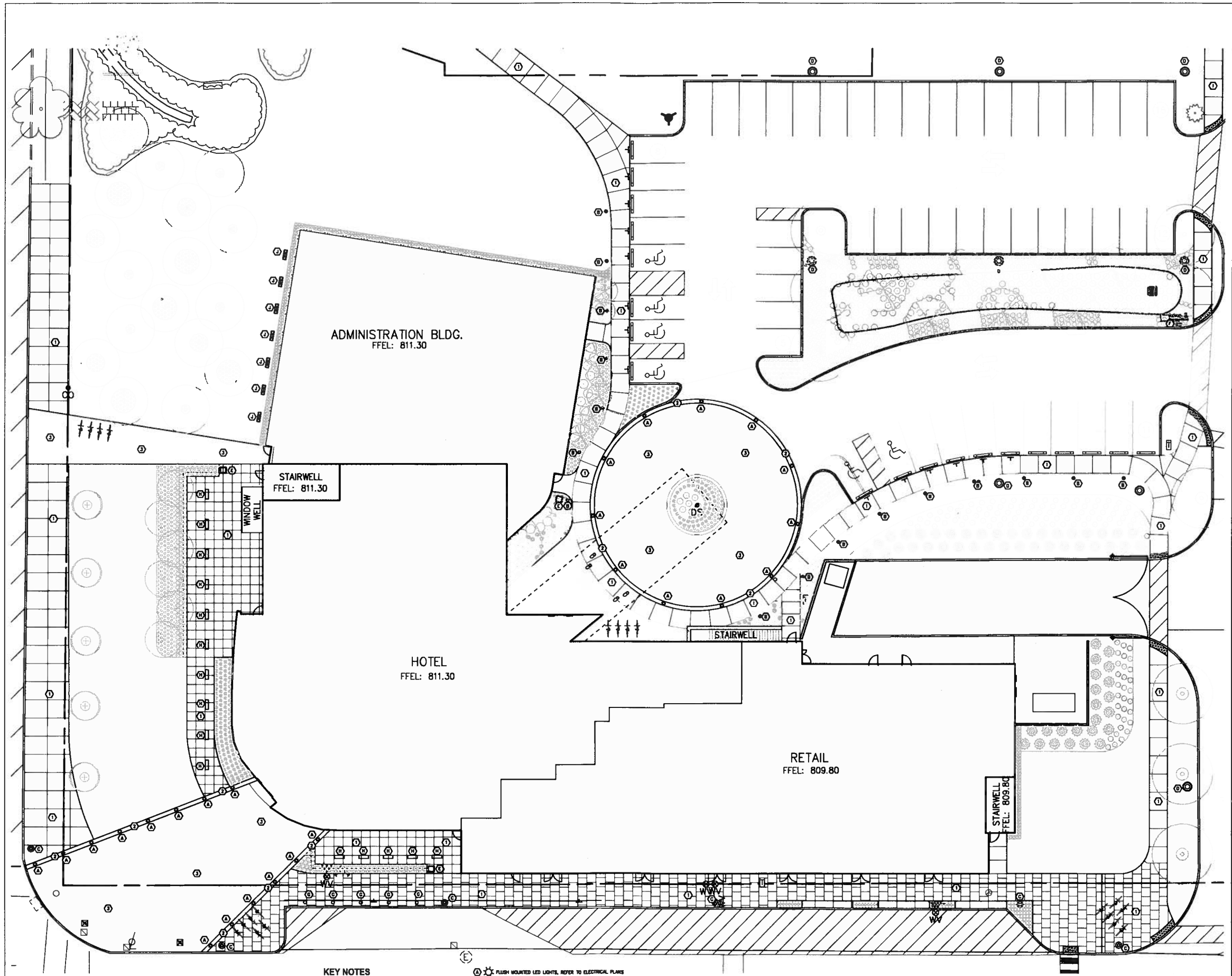
SITE LANDSCAPE PLAN

Drawn By: JSO
Checked By: DJN
Project Number: 2012007
Sheet Number: C6.0



1 SITE PLAN ENLARGEMENT
SCALED: 1" = 10'

KEY NOTES

1. CONCRETE PAVEMENT WITH SCORE LINES AS SHOWN
2. 16" CONCRETE BAND WITH GROUND MOUNTED LIGHTS
3. STAMPED CONCRETE
   COLOR: COCOA (INTEGRAL FROM DAVIS COLORS)
   PATTERN: RANDOM SLATE

A. FLUSH MOUNTED LED LIGHTS, REFER TO ELECTRICAL PLANS
B. LIGHTED BOLLARD, REFER TO ELECTRICAL PLANS
C. CITY STANDARD LIGHT POLE, REFER TO ELECTRICAL PLANS
D. MOUNTED POLE LIGHT, REFER TO ELECTRICAL PLAN
E. TRASH RECEPTACLE
F. MONUMENT SIGN LIGHT, REFER TO ELECTRICAL PLANS
G. XEN 451 20WTH SLOPED STAINLESS STEEL BOLLARD, OR APPROVED SIMILAR
H. LINEAR GROUND MOUNTED FLOOD LIGHT, REFER TO ELECTRICAL PLANS
J. ABOVE GRADE FLOOD LIGHT, REFER TO ELECTRICAL PLANS

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NO.	DATE	DESCRIPTION
	06.25.2014	ISSUED FOR BUILDING PERMIT
1	05.30.2014	ISSUED FOR ADDENDUM NO. 1
	03.21.2014	CONTRACT PROGRESS SET
	07.17.2013	ISSUED FOR SITE PLAN REVIEW
	06.07.2013	ISSUED FOR 100% DD
	05.10.2013	ISSUED FOR 50% DD

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SITE LANDSCAPE ENLARGEMENTS

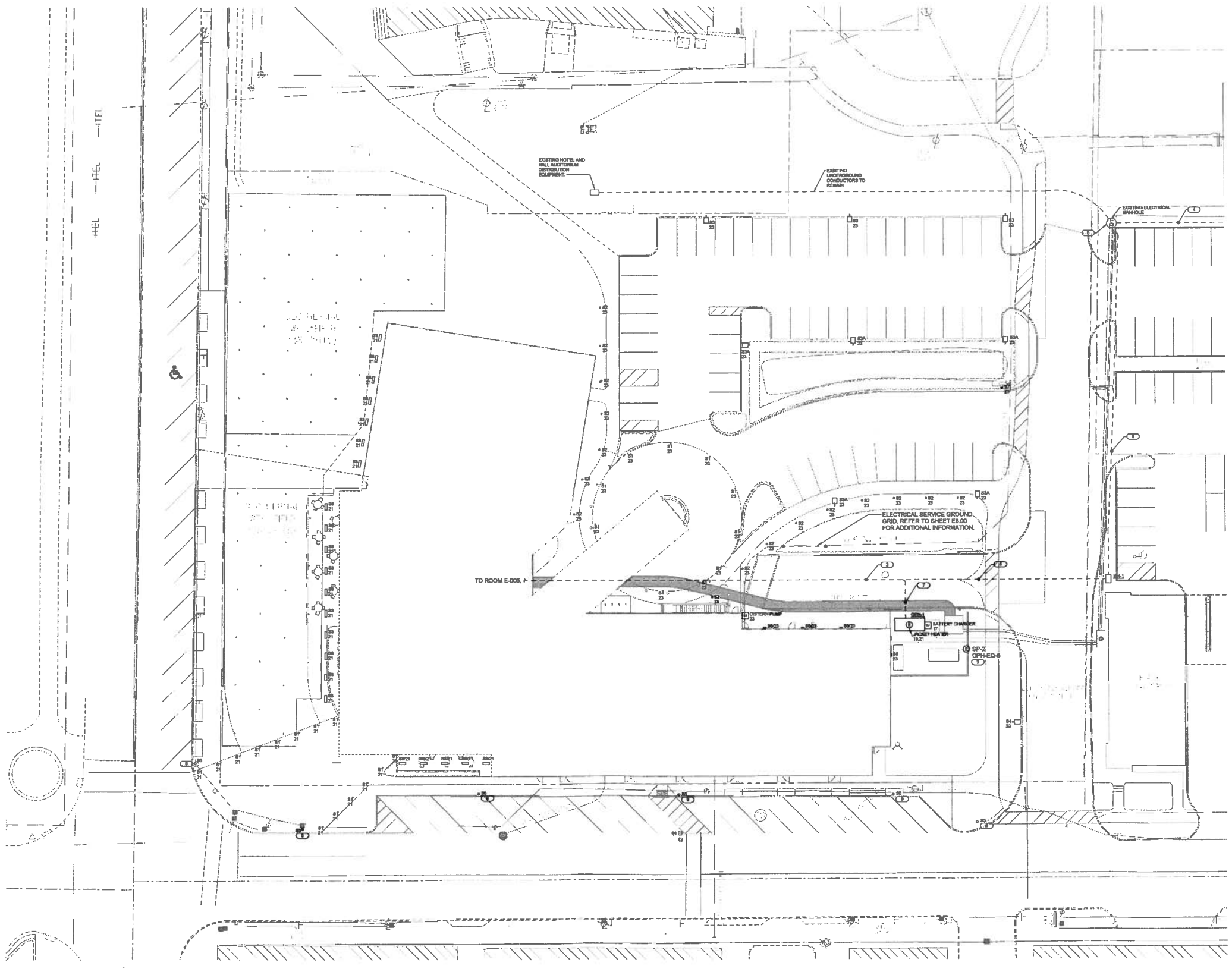
Drawn By: JSO
Checked By: DJN
Project Number: 2012007
Sheet Number: C6.1

SHEET GENERAL NOTES:

1. REFER TO SHEET E0.00 FOR ELECTRICAL SYMBOL LIST, ELECTRICAL GENERAL NOTES AND ELECTRICAL INSTALLATION NOTES.
2. EXTERIOR LIGHTING TO BE CONTROLLED VIA PHOTOCELL FOR ON OPERATION AND TIME CLOCK FOR AUTOMATIC OFF. REFER TO DETAIL 1/E7.02.
3. ALL LIGHTING ON THIS SHEET TO BE FED FROM PANEL BH-L1 UNLESS OTHERWISE NOTED.

KEYNOTES:

1. REFER TO M7.02 FOR EXTERIOR LIGHTING CONTROL DETAIL.
2. REFER TO 3/E7.01 FOR MAIN DUCT BANK DETAIL.
3. CONNECTION TO BEHAGE PUMP CONTROLLER. PROVIDE UNDERGROUND CONDUIT AND WIRING TO PUMP CONNECTION POINTS FOR POWER AND CONTROLS. PROVIDE SEAL-OFF AT ENTRANCE TO PIT.
4. EXISTING UTILITY PRIMARY. REFER TO OHS-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
5. PROVIDE NEW SPLICE FOR HALL AUDITORIUM FEEDER AS PART OF ALTERNATE BID.
6. REFER TO 8/E7.01 FOR GENERATOR DUCT BANK DETAIL.
7. REFER TO 1/E7.01 FOR MEDIUM VOLTAGE DUCT BANK DETAIL.
8. PROVIDE ALTERNATE BID TO INSTALL NEW DUCT BANK FROM MH-1 TO EXISTING MANHOLE. REFER TO 9/E7.01 FOR DUCT BANK DETAIL. REFER TO OHS-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
9. CITY STREET LIGHTING FIXTURE TO BE TIED INTO EXISTING UNDERGROUND CIRCUIT AND CONTROL.



NORTH 1 SITE PLAN - ELECTRICAL
1/16" = 1'-0"

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SERIGRAPH SCALE IN INCHES
0 1 2 3 4

05.26.14

NO.	DATE	DESCRIPTION
1	05.28.2014	Issued for Building Permit
	03.31.2014	Contract Document Progress Set
	06.10.2013	Issued for 100% DD
	06.10.2013	40% DESIGN DEVELOPMENT

OBERLIN GATEWAY BUILDING

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SITE PLAN - ELECTRICAL

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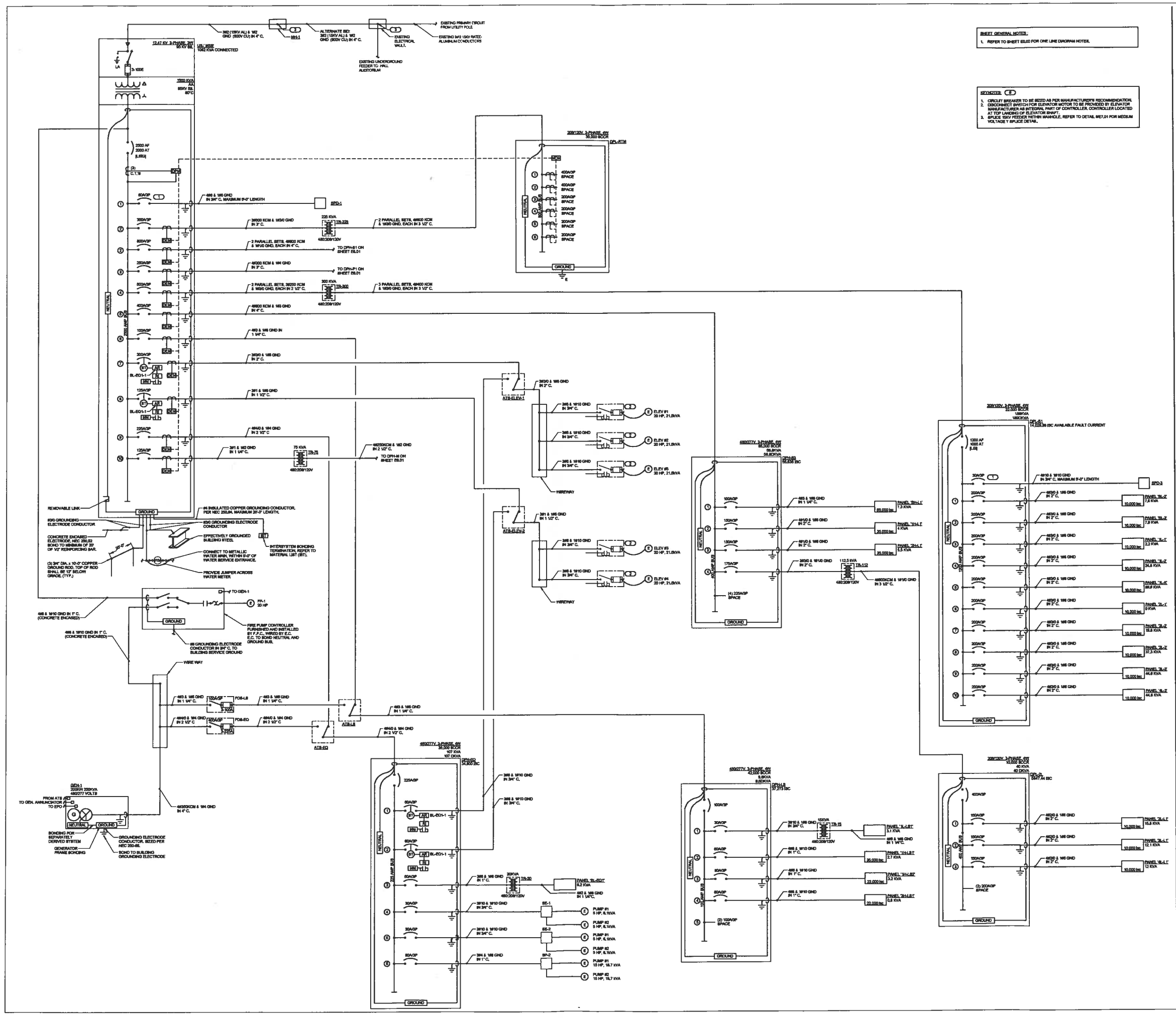
Sheet Number: E1.00



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DRAWING SCALE IS 3/32"

05.28.14

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1	06.06.2014	Issued for Building Permit
	03.31.2014	Combined Documents Progress Set
	08.10.2013	Issued for 100% DD
	08.10.2013	40% DESIGN DEVELOPMENT

OBERLIN GATEWAY BUILDING

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ONE-LINE DIAGRAM - ELECTRICAL

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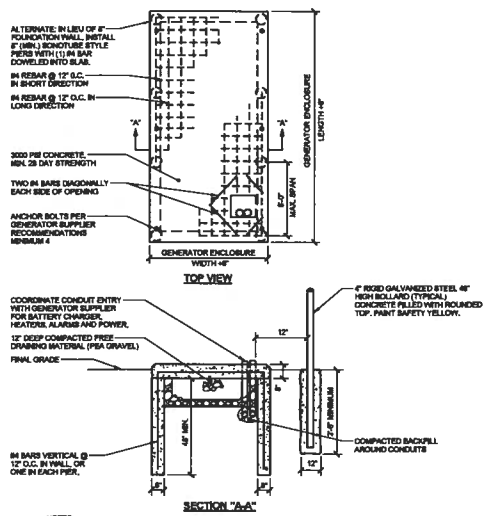
Sheet Number: E6.00

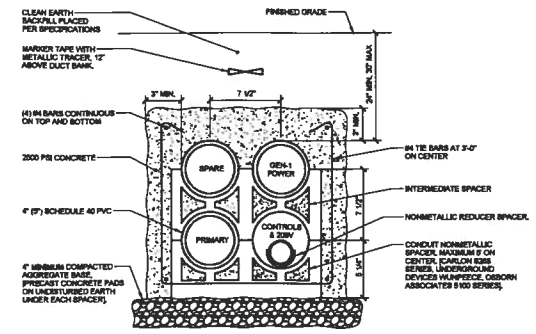


NOTES:

1. COORDINATE PAD DIMENSIONS WITH GENERATOR SUPPLIER PRIOR TO START OF CONSTRUCTION.
2. COORDINATE WITH CIVIL ENGINEER PAD SURROUNDING AREA GRADE CONDITIONS.

1 GENERATOR PAD DETAIL

NO SCALE

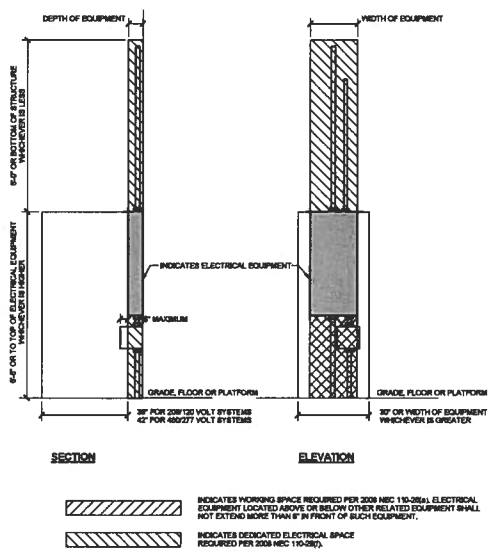


NOTES:

1. INSTALL 2000 lb TENSILE STRENGTH BRAIDED POLYPROPYLENE PULL CORD IN ALL CONDUITS.
2. TRENCHING AND BACKFILL ACCORDING TO SPECIFICATIONS.
3. MINIMUM OF 6'-0" CLEAR BETWEEN ADJACENT DUCTBANKS.
4. DOWEL ENDS OF DUCTBANK TO FOUNDATION OR MANHOLE WITH A MINIMUM OF (4) #4 DOWELS.

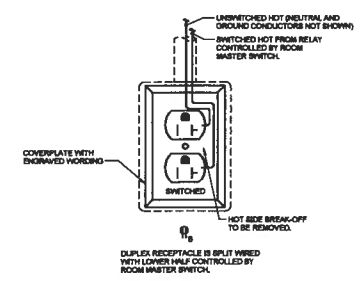
2 MAIN DUCT BANK DETAIL

12" = 1'-0"



3 PANELBOARD EQUIPMENT CLEARANCES

NO SCALE

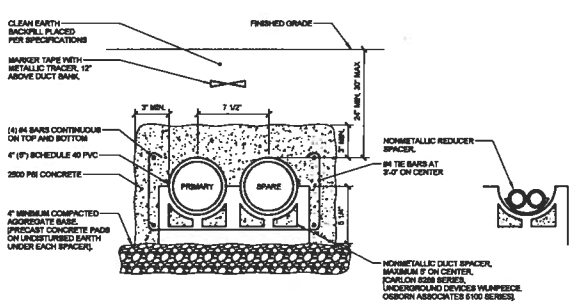


4 GUESTROOM SWITCHED RECEPTACLE WIRING

NO SCALE

5 TRANSFORMER WIRING DETAIL

NO SCALE

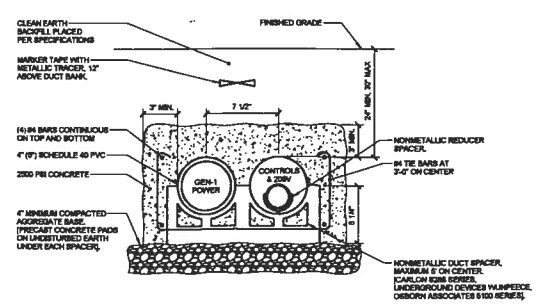


NOTES:

1. INSTALL 2000 lb TENSILE STRENGTH BRAIDED POLYPROPYLENE PULL CORD IN ALL CONDUITS.
2. TRENCHING AND BACKFILL ACCORDING TO SPECIFICATIONS.
3. MINIMUM OF 6'-0" CLEAR BETWEEN ADJACENT DUCTBANKS.
4. DOWEL ENDS OF DUCTBANK TO FOUNDATION OR MANHOLE WITH A MINIMUM OF (4) #4 DOWELS.

6 GENERATOR DUCT BANK DETAIL

NO SCALE

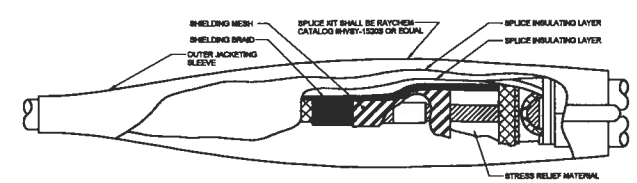


NOTES:

1. INSTALL 2000 lb TENSILE STRENGTH BRAIDED POLYPROPYLENE PULL CORD IN ALL CONDUITS.
2. TRENCHING AND BACKFILL ACCORDING TO SPECIFICATIONS.
3. MINIMUM OF 6'-0" CLEAR BETWEEN ADJACENT DUCTBANKS.
4. DOWEL ENDS OF DUCTBANK TO FOUNDATION OR MANHOLE WITH A MINIMUM OF (4) #4 DOWELS.

7 MEDIUM VOLTAGE DUCT BANK DETAIL

NO SCALE



8 MEDIUM VOLTAGE Y SPLICE

NO SCALE

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SPRINKLER RISER DIAGRAMS

05.28.14

NO.	DATE	DESCRIPTION
1	05.28.2014	Issued for Building Permit
	03.31.2014	Contract Document Progress Set

OBERLIN GATEWAY BUILDING

Oberlin, Ohio

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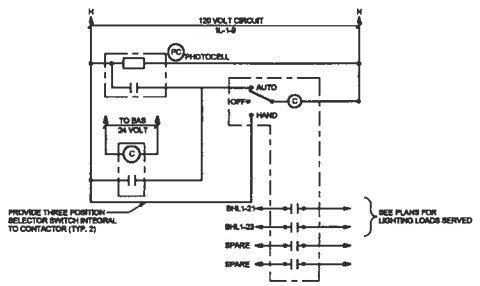
DETAILS - ELECTRICAL

Drawn By: Author
Checked By: Checker
Project Number: 2012007
Sheet Number: E7.01



NOTES:

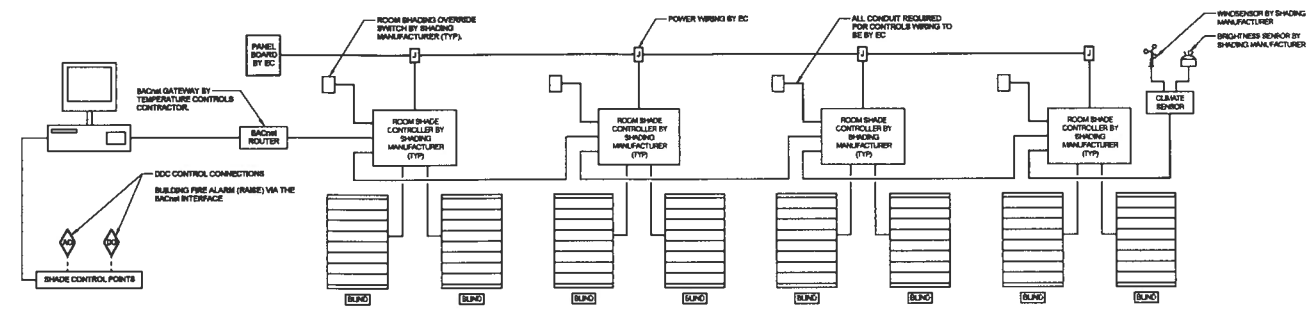
1. A WIRING DIAGRAM DEPECTING AS -CONSTRUCTED CONDITIONS SHALL BE POSTED NEAR EACH CONTACTOR.

KEYNOTES:

1. RELAY CONTROLLED BY BUILDING AUTOMATION SYSTEM REFER TO SPECIFICATION SECTION 23 09 00 FOR ADDITIONAL INFORMATION.
2. REFER TO SHEET E4.00 FOR PHOTOCELL LOCATION.

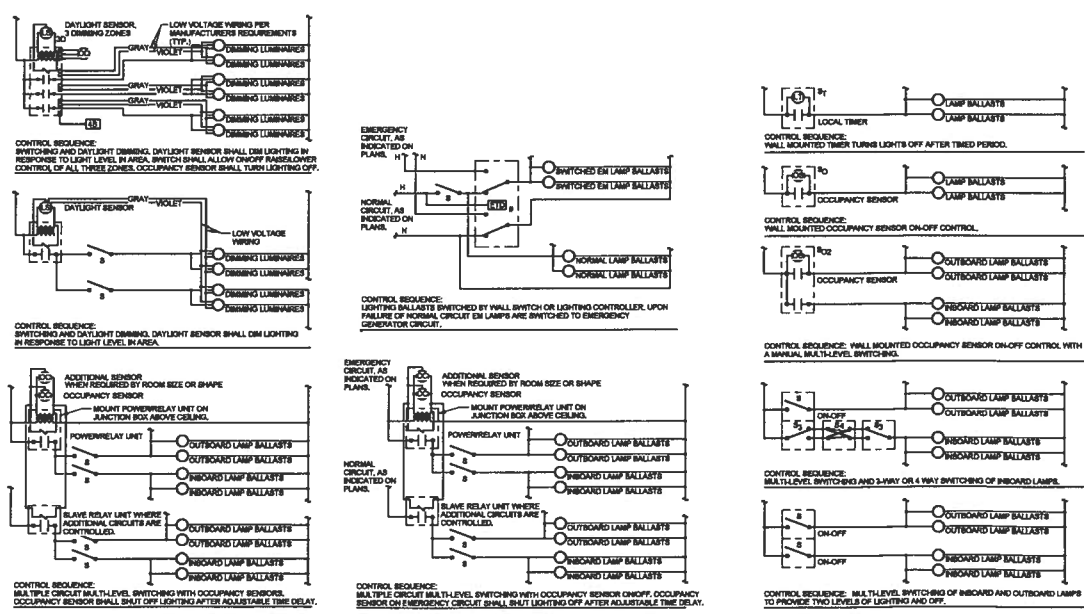
1 EXTERIOR LIGHTING CONTROL DETAIL

NO SCALE



3 SHADE CONTROL CONNECTION

12" = 1'-0"

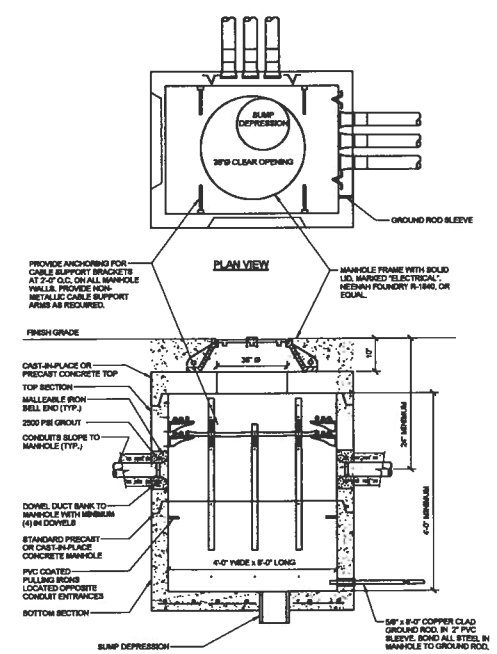


NOTES:

1. SEE LIGHTING PLANS FOR ACTUAL NUMBER OF LUMINAIRES.

2 LIGHTING CONTROL SEQUENCES

12" = 1'-0"



SECTION VIEW

4 ELECTRICAL MANHOLE DETAIL

12" = 1'-0"

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DRAWING SCALE IS 2000:0

05.28.14

NO.	DATE	DESCRIPTION
1	05.28.2014	Issued for Building Permit
	05.13.2014	Combined Documents Progress Set

OBERLIN GATEWAY BUILDING

Oberlin, Ohio

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DETAILS - ELECTRICAL

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Project Number: 2012007
Sheet Number: E7.02

Honey Locust

River Birch

Serviceberry

Prairie Fire Crabapple

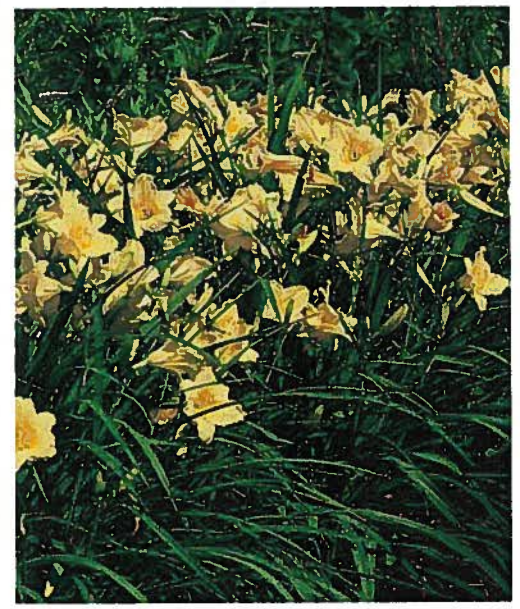
Dwarf Fountain Grass

Oakleaf Hydrangea

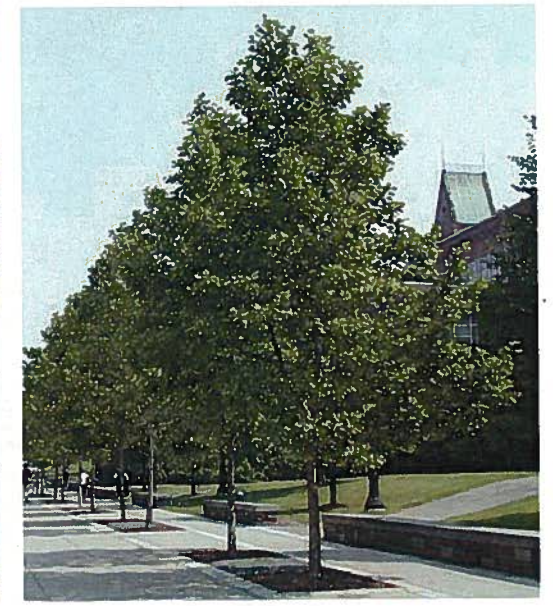
Bowhall Maple

Feather Reed Grass

Japanese Bloodgrass


Happy Returns Daylily

Norway Spruce


London Planetree

Appalachian Sedge

Creeping Lilyturf

Ostrich Fern

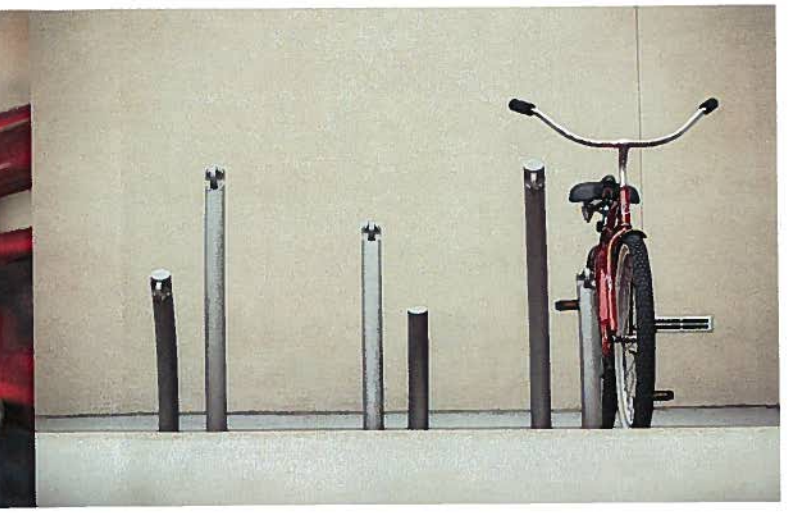
Excelsa Arborvitae

Date: June 2014
Project #: 13640

Plant Material

Gateway Building - Oberlin College

NEFF & ASSOCIATES
Civil Engineers • Landscape Architects • Planners • Surveyors
Traffic Engineers • Environmental Engineers



BIKE GARDEN™ BIKE RACK

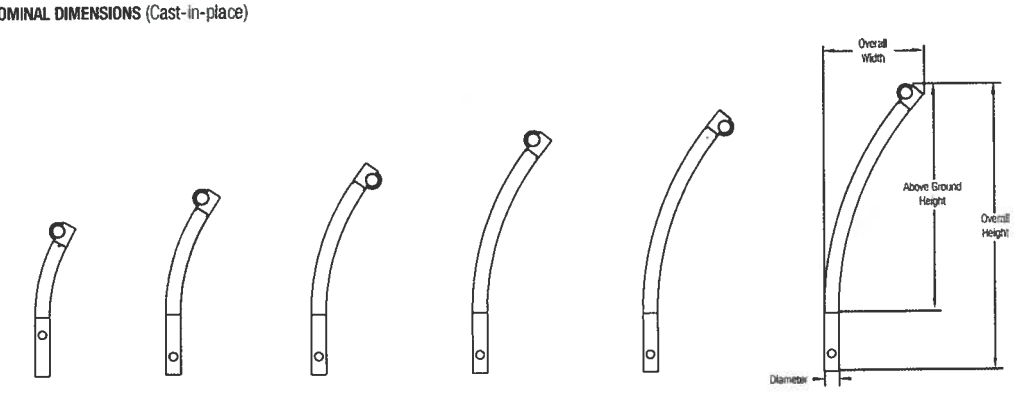
PRODUCT DATA

Inspired by organic forms, the **Bike Garden** provides a truly unique solution to the increasing challenges of bike parking and security. Its "stems" can be arranged in a wide variety of configurations to creatively accommodate almost any setting and provide riders with the added assurance of multiple locking points to secure the frame and wheels. Constructed entirely of rugged, corrosion-resistant stainless steel, Bike Garden's stems can be surface mounted or cast-in-place and may be purchased individually for maximum arrangement flexibility or in pre-configured layouts.

MATERIALS & FINISHES / **INSTALLATION & MAINTENANCE**

MATERIALS	FINISH	GUIDELINES & SECURITY	INSTALLATION	MAINTENANCE
• Constructed entirely of corrosion-resistant stainless steel. • Head and optional surface mount foot are cast stainless steel; body is stainless steel tubing.	• Available in stainless steel with a radial Satin finish or powdercoated. • Standard powdercoat colors are Aluminum Texture and Slate Texture; optional colors from the F+S color chart and custom RAL colors are available for an upcharge. • Due to the inherent nature of metal castings, gloss powdercoats are not offered for cast components.	• Configurations A, B, and C of the Bike Garden Bike Rack meet Association of Pedestrian and Bicycle Professionals (APBP) recommendations. • Locking point details and mounting configurations that meet APBP standards can be found on pages 2 and 3 of this document.	• Bike Garden can be cast-in-place or surface mounted. Anchors and stainless steel screws are included for surface mount.	• Metal surfaces can be cleaned as needed using a soft cloth or brush with warm water and a mild detergent. Avoid abrasive cleaners.

NOMINAL DIMENSIONS (Cast-in-place)



MODEL	ABOVE-GROUND HEIGHT	OVERALL HEIGHT	OVERALL WIDTH	DIAMETER	WEIGHT
SKGAR-162-CIP	16.2" (411 mm)	26.2" (665 mm)	7.1" (180 mm)	2.5" (63.5 mm)	8.6 lbs (3.9 kg)
SKGAR-208-CIP	20.8" (528 mm)	30.8" (782 mm)	9.2" (234 mm)	2.5" (63.5 mm)	9.8 lbs (4.4 kg)
SKGAR-254-CIP	25.3" (643 mm)	35.3" (897 mm)	11.8" (300 mm)	2.5" (63.5 mm)	11.3 lbs (5.1 kg)
SKGAR-300-CIP	29.9" (759 mm)	39.9" (1,013 mm)	13.3" (338 mm)	2.5" (63.5 mm)	12.7 lbs (5.8 kg)
SKGAR-344-CIP	34.4" (874 mm)	44.4" (1,128 mm)	15.8" (401 mm)	2.5" (63.5 mm)	14.1 lbs (6.4 kg)
SKGAR-391-CIP	39.1" (993 mm)	49.1" (1,247 mm)	17.3" (439 mm)	2.5" (63.5 mm)	15.4 lbs (7.0 kg)

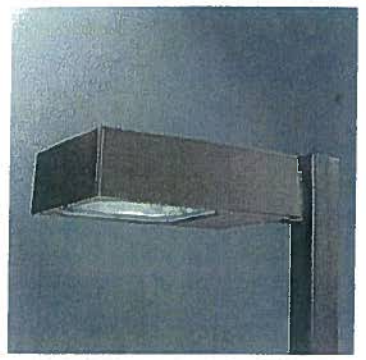
Date: 6/2014
Proj. #: 13640

Proposed Bike Rack

Smart Hotel - Oberlin

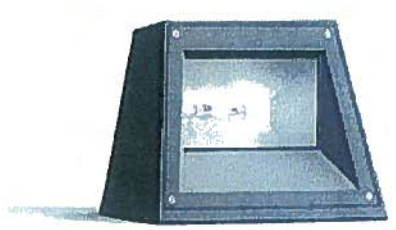
NEFF & ASSOCIATES

Bega In-Ground LED Light



Lithonia Lumark Site Luminaire

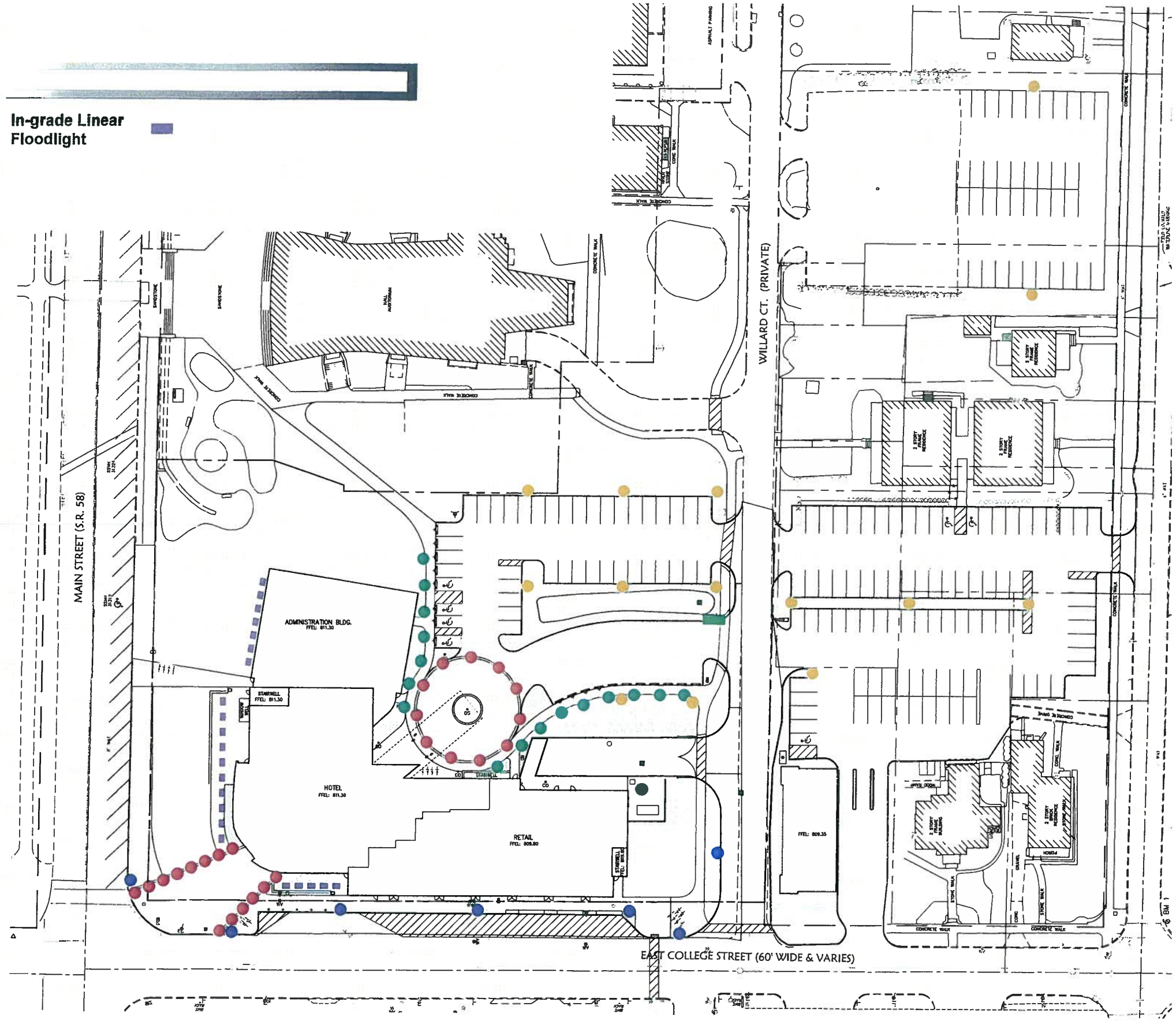
Lithonia MRP-LED1 Site Luminaire



Surface Mounted Floodlight

Lighted Stainless Steel Bollard

City of Oberlin Standard Post Light

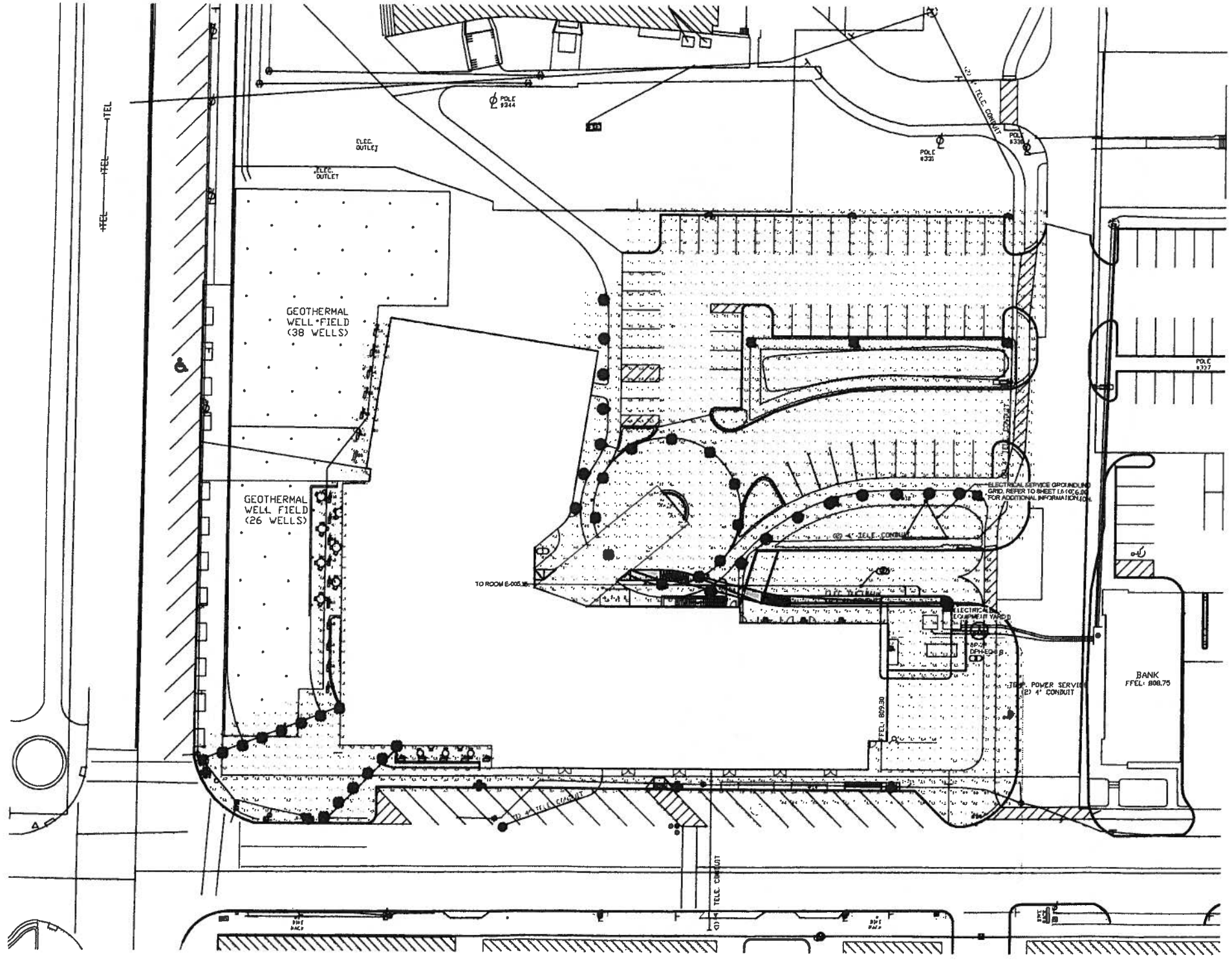


Date: 6/2014
Proj. #: 13640

Lighting Material & Locations

Oberlin College - Oberlin, Ohio

NEFF & ASSOCIATES
Civil Engineers · Landscape Architects · Planners · Surveyors
Traffic Engineers · Environmental Engineers



1 SITE PHOTOMETRIC PLAN

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CONTRACT DOCUMENT
PROGRESS SET 03.31.14

NO.	DATE	DESCRIPTION

OBERLIN GATEWAY BUILDING

Oberlin, Ohio

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SITE PHOTOMETRIC PLAN

Drawn By: Author
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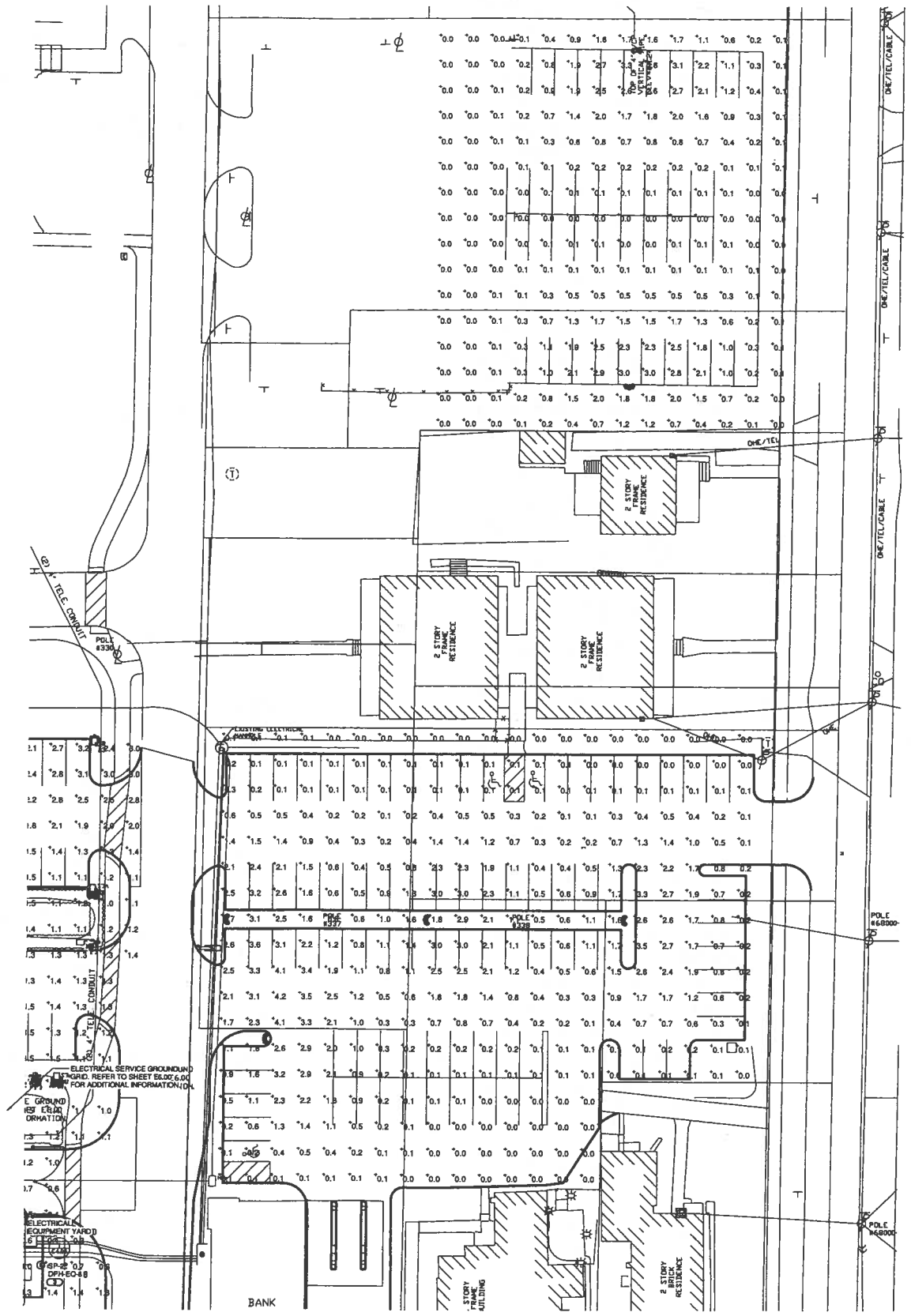
Sheet Number: E1.01



1 SITE PHOTOMETRIC PLAN1
1/16" = 1'-0"

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SITE PHOTOMETRIC PLAN1

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