

August 27, 2014

Attn: Victoria Proehl  
Community Development Manager  
The City of Grove City Ohio  
4035 Broadway, Grove City, OH 43123  
P: (614)-277-3000



Regarding: 4145 Buckeye Parkway  
Control Number: #201508030056

1. The property owner signature is missing from the application. Please resubmit the application with all applicable signatures.

*Response: Signature has been added to the application.*

2. A note should be added to the Site and utility Plan (sheet 2/3) referring to the area covered by the easement agreement established in 2002 for the use of the city's property (PID 040-009242) for the development of the site.

*Response: The easement has been delineated and the note added to sheet 2.*

3. Details for all proposed signage should be submitted including wall signs, monument signs, and directional signage. The notes below were stipulations on the approval of the previously approved development plan for the site (Fuji Restaurant) regarding signage and should be incorporated into signage for the proposed development.

- Wall signs should be comprised of individually mounted channel letters with no exposed neon or raceway
- Wall signs shall not exceed a combined maximum of 120 feet.

*Response: Compiled with the H.C. sign modification per Grove City ADA sign detail.*

4. Any monument signs or directional signs should have a brick base, matching the brick utilized on the primary structure.

*Response: Signage will comply.*

5. A note should be added to the dumpster screening detail that the proposed brick will match that utilized on the primary structure.

*Response: Note has been added to sheet 2 regarding the dumpster brick.*

6. A clearer photometric plan should be submitted. Lighting levels are unreadable on submitted plans (Sheet ES-1). The plan will need to show that all vehicular and pedestrian areas meet the 0.5 footcandle minimum.

**Response:** *New photometric plan has been included.*

7. The height of the proposed site lighting fixtures should be noted on the sheet ES-1. Poles should be a maximum of 28'.

**Response:** *Noted on ES-1.*

8. A pole-mounted "gas light-type" fixture should be located within the front landscape area to match the "theme" of the Parkway Centre development. The location of this fixture should be noted on plans and details (cut sheets) should be submitted for the fixture (see attached detail).

**Response:** *Detail has been added.*

9. Details for any benches, bike racks, trash receptacles or other site amenities should be submitted. These features should match those found in other Parkway Centre developments (see attached detail sheet from previously approved development plan for the site).

**Response:** *Details have been added.*

10. Building elevations should be submitted showing the height of all various building elements. The exterior finish material should also be labelled on elevations along with a percentage breakdown of each material on the building. Per the development standards text for the area (CR-82-03), all four sides of buildings shall be a minimum of 50% brick.

**Response:** *Building elevations have been added.*

11. A note should be added to the building elevations that all rooftop mechanicals will be screened on all sides by raising the building parapet.

**Response:** *Added to elevation sheet.*

12. An "8.5x11" finish schedule should be submitted detailing the color and manufacturer of all proposed exterior materials.

**Response:** *Exterior finishes have been added to the elevation sheet.*

13. A project sample board should be submitted with samples of all proposed exterior materials.

**Response:** *Samples will be brought to the meeting.*

14. Due to multiple tenants, signage should be subject to C-48-04 (Development Plan amendment for Parkway Center South) stipulations.

**Response:** *Signage will comply.*

15. Setbacks for Parkway Center South are not typical which suggest this project should be consistent with setbacks along Buckeye Parkway.

**Response:** *Setbacks have been matched with surrounding properties.*

16. Will restaurant tenants want drive –thru or outdoor seating? If so Special Use Permits would be required as well as decorative fencing, bollards, and possibly additional landscaping. Parking would be reduced for drive-thru.

**Response:** *No outdoor seating is planned at this time.*

17. 1136.10: Preservation of Existing Trees: Plans need to indicate what steps will be used to ensure the integrity of the trees that are to be left on site during construction.

**Response:** *Noted on plans.*

18. A note needs to be added that states any damage done to the existing irrigation along Buckeye Parkway is the responsibility of the contractor to repair. The irrigation can be marked before construction begins if they ask in advance.

**Response:** *Noted on plans.*

20. Provide the methodology used for calculating the required number of parking spaces on the site.

**Response:** *Business Cat. I – 1 space per 200sf.  $2932 / 200 = 15$  spaces  
Restaurant – Per Resolution No. CR-82-03 1 space per 125 sf.  $3946 / 125 = 32$  spaces  
Minimum number of spaces required 47.*

21. Include a statement that all exterior mechanical equipment will be screened.

**Response:** *Added to elevation sheet.*

22. Provide proposed grading information on the plan, including flood routing. Presently it appears that water could enter the building during severe storm events.

**Response:** *A preliminary grading plan has been added and the preliminary flood routing indicated. This is new sheet 3.*

23. Clarify where the pavement will be flush with the sidewalk. All the way around or just at the ADA accessible parking? Show parking blocks where appropriate.

**Response:** *Flush sidewalk/pavement at the building front only, the remaining locations are curbed sidewalk.*

24. Show the existing fire hydrants on Buckeye Parkway in the vicinity of the project site.

**Response:** *Will be provided.*

25. Show the existing edge of pavement on both sides of Buckeye Parkway and the private streets. Include the median at the Right-In / Right-Out north of the site.

**Response:** *Will be provided.*

26. Show the existing pavement markings on Buckeye Parkway and the private streets, and any proposed modifications.

*Response: Will be provided.*

27. The entrance to the site on the south side does not meet the minimum spacing requirement from the intersection with Buckeye Parkway. Move the drive west behind the left turn stacking lane to utilize the existing center turn lane in Street B.

*Response: The entrance has been revised and Grove City has approved the location.*

28. Provide details on water metering configuration in accordance with Development Plan Checklist item 18. The city of Columbus Division of Water will have the final approval authority on the tap and meter configuration.

*Response: Water metering will be inside the building, and coordinated with city of Columbus standards.*

30. A Knox Box will need to be installed on the building for emergency access (OFC 506)

*Response: A Knox Box will be added to the construction documents.*

Please feel free to contact me with any comments or questions regarding this project. Thank you for your time.

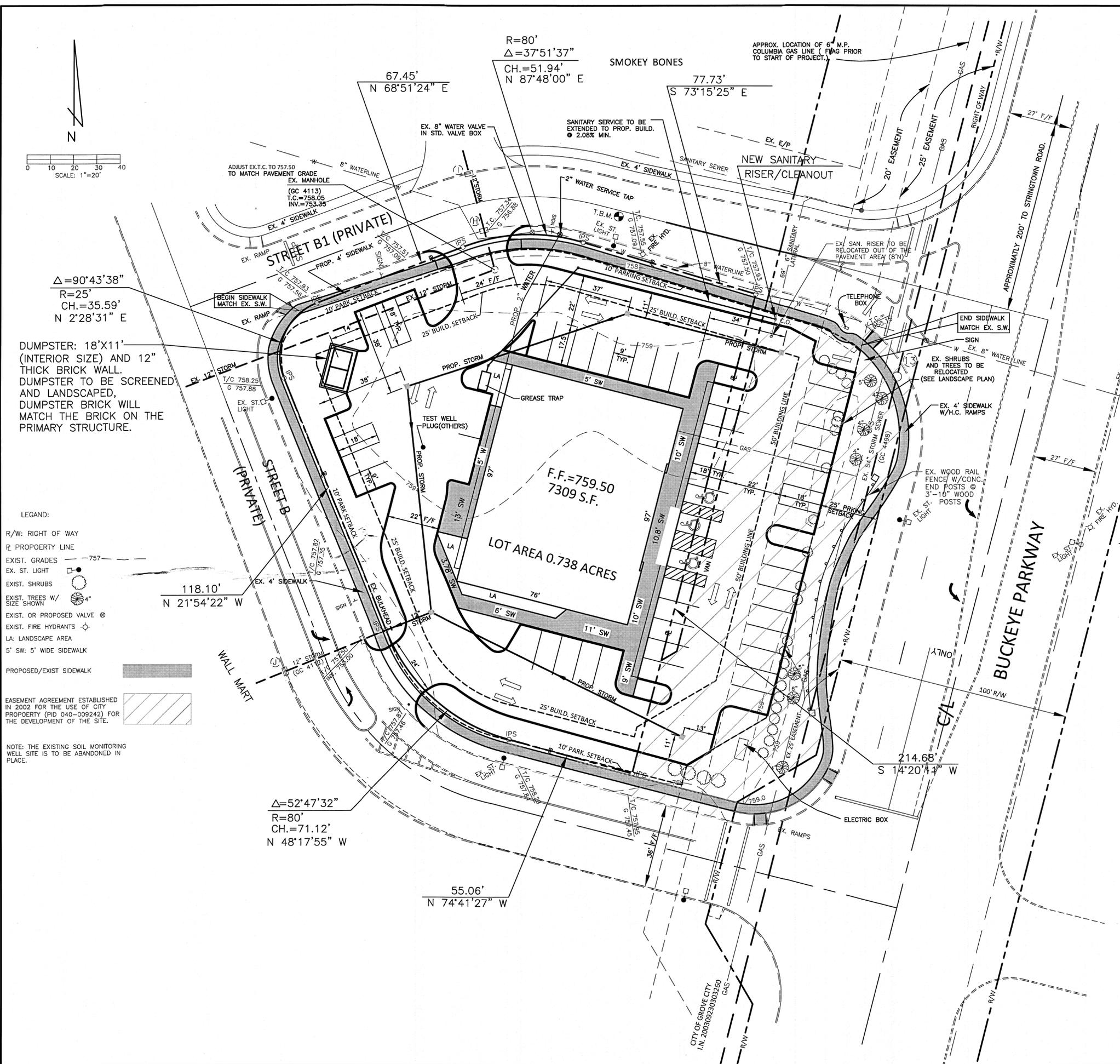
Sincerely,



Ronald E. Zinn

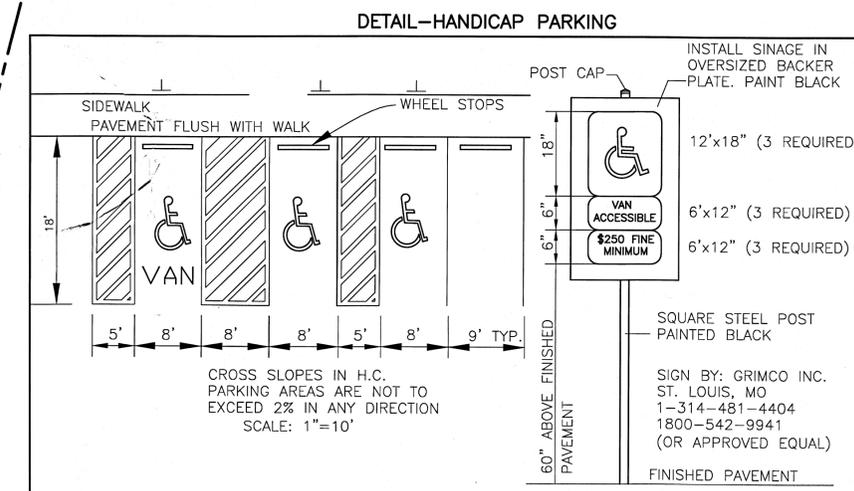


# PARKWAY CENTER 4145 BUCKEYE PARKWAY GROVE CITY, OHIO



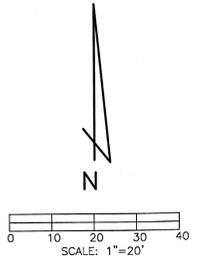
**LEGEND:**

- R/W: RIGHT OF WAY
- PL: PROPERTY LINE
- EXIST. GRADES: 757
- EX. ST. LIGHT
- EXIST. SHRUBS
- EXIST. TREES W/ SIZE SHOWN
- EXIST. OR PROPOSED VALVE
- EXIST. FIRE HYDRANTS
- LA: LANDSCAPE AREA
- 5' SW: 5' WIDE SIDEWALK
- PROPOSED/EXIST SIDEWALK
- EASEMENT AGREEMENT ESTABLISHED IN 2002 FOR THE USE OF CITY PROPERTY (PID 040-009242) FOR THE DEVELOPMENT OF THE SITE.
- NOTE: THE EXISTING SOIL MONITORING WELL SITE IS TO BE ABANDONED IN PLACE.



<b>PROJECT NAME:</b> PARKWAY CENTER 4145 BUCKEYE PARKWAY GROVE CITY, OHIO			
	<b>PLAN PREPARED BY:</b> Columbus Engineering Consultants, Inc. Consulting Engineers		
	870 Michigan Avenue Columbus, OH 43215 (614) 228-3500 E-MAIL: cec@ceceng.net		
<b>REGISTERED ENGINEER</b> DATE: 8/27/2015	Suliman Z. Abdullah		
<b>CEC JOB NUMBER:</b>			
<b>GROVE CITY PROJECT NO.:</b>			
<b>SITE AND UTILITY PLAN</b>			
SCALE AS SHOWN	DATE 8/27/2015	DRAWN BY SA	DWG. NO. 2/6

# PARKWAY CENTER 4145 BUCKEYE PARKWAY GROVE CITY, OHIO

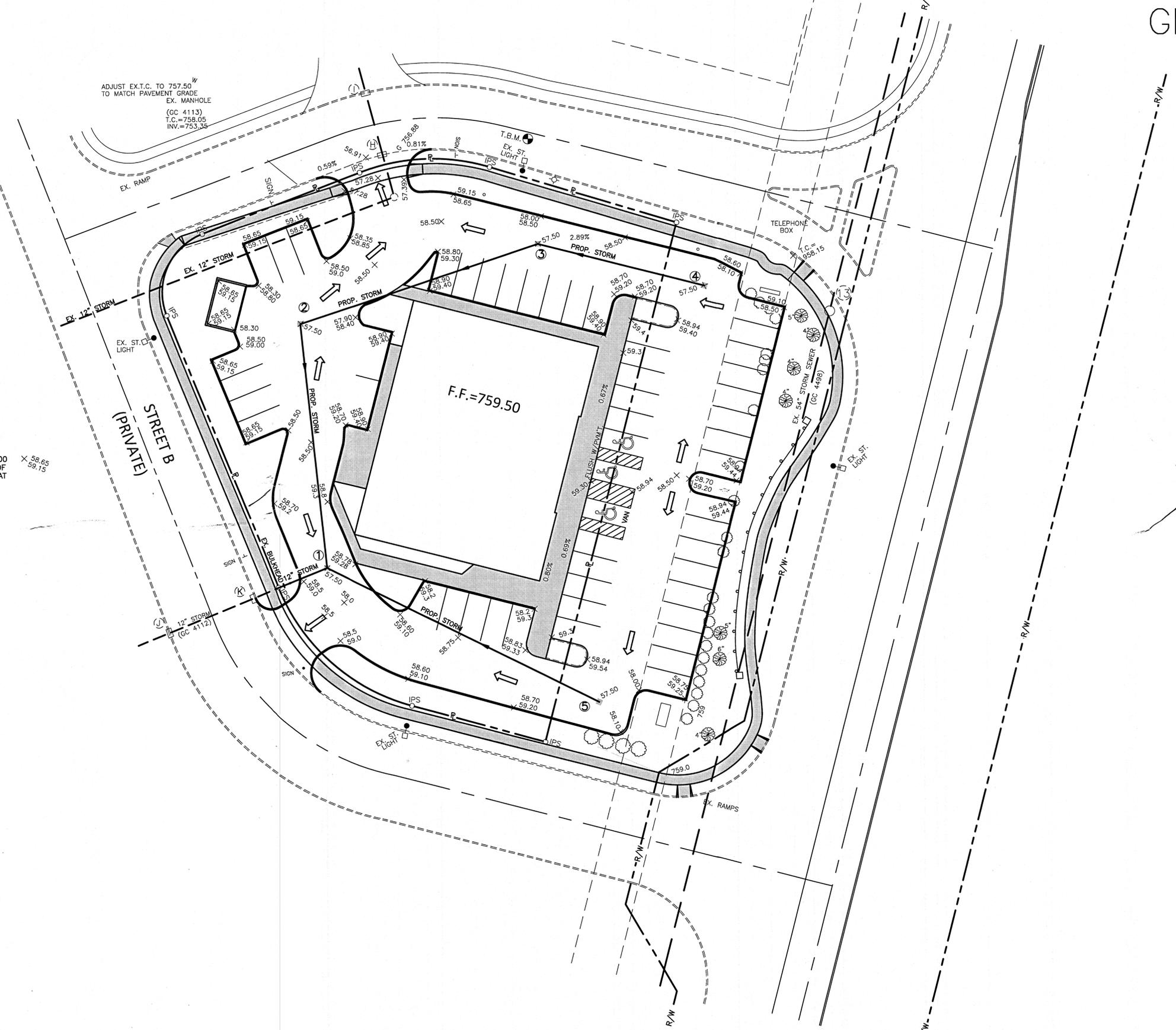


APPROX. LOCATION OF 6" M.P. COLUMBIA GAS LINE ( FLAG PRIOR TO START OF PROJECT.)

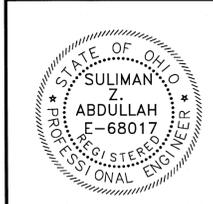
ADJUST EX.T.C. TO 757.50 TO MATCH PAVEMENT GRADE  
EX. MANHOLE  
(GC 4113)  
T.C.=758.05  
INV.=753.35

FLOOD ROUTING →

PROPOSED ELEVATION, ADD 700 LOWER NUMBER IS @ EDGE OF PAVEMENT, HIGH NUMBER IS AT TOP OF CURB



PROJECT NAME:  
PARKWAY CENTER  
4145 BUCKEYE PARKWAY  
GROVE CITY, OHIO



PLAN PREPARED BY:  
Columbus Engineering  
Consultants, Inc.  
Consulting Engineers

870 Michigan Avenue  
Columbus, OH 43215  
(614) 228-3500  
E-MAIL:cec@ceceng.net

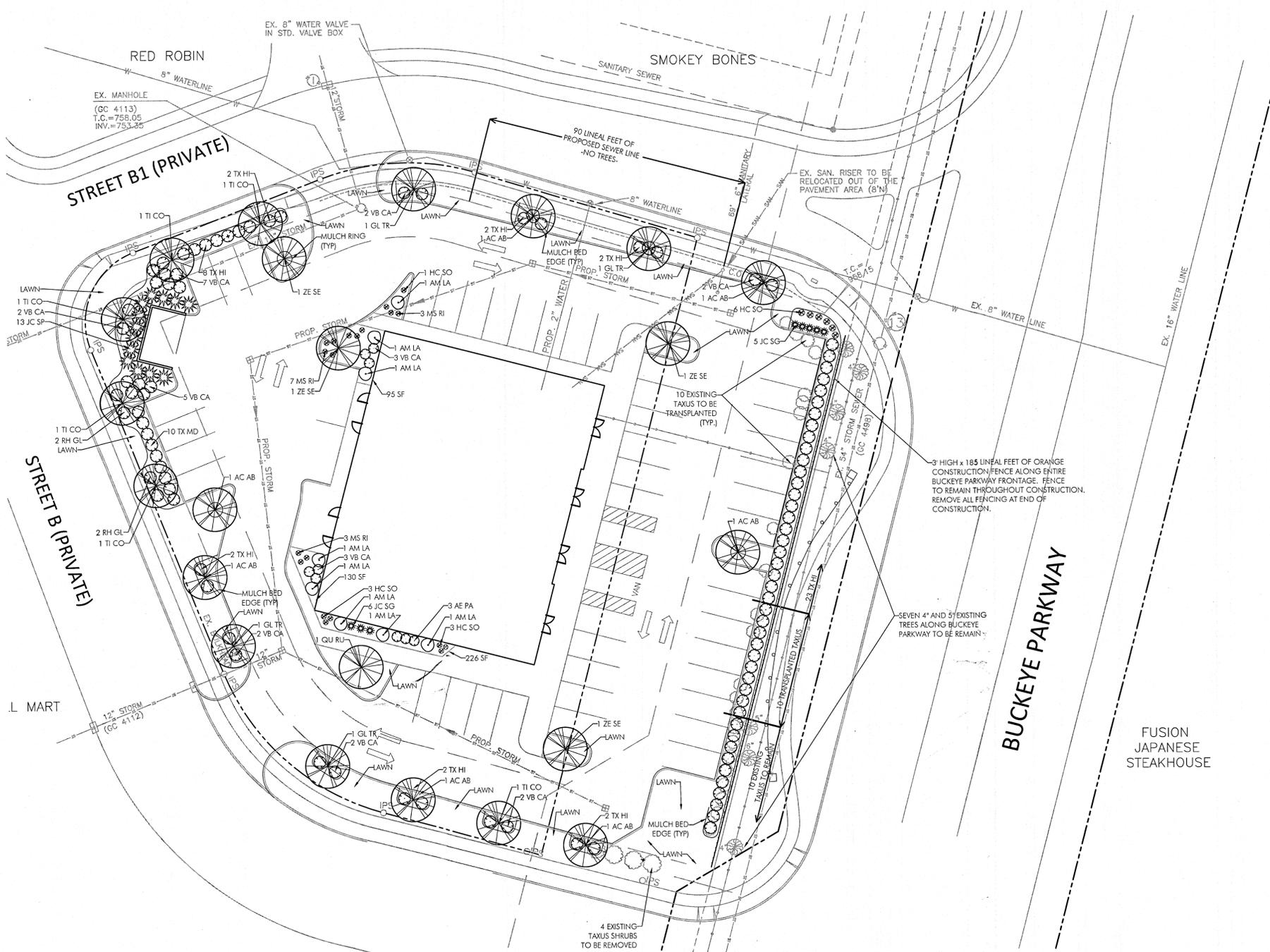
REGISTERED ENGINEER  
DATE: 8/27/2015 *Suliman Z. Abdullah*

CEC JOB NUMBER:

GROVE CITY PROJECT NO.:

PRELIMINARY GRADING & DRAINAGE PLAN

SCALE AS SHOWN	DATE 8/27/2015	DRAWN BY SA	DWG. NO. 3/6
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**CITY STANDARD NOTES**

- Contractor shall protect existing vegetation protection areas. No construction access to and activities (including stockpiling or disposal of construction material) in existing vegetation protection areas is permitted. (1136.05)
- Service structures, including, but not limited to, propane tanks, trash dumpsters, electrical transformers, air conditioners/cooling towers, heat pumps, utility vaults which extend above grade, and other equipment or elements providing service to a building or site, are to be screened in all zoning districts. A continuous 100% opaque landscape hedge, solid fence, wall, or earthen mound is required to enclose any service structure on all exposed sides. If such structure is frequently moved (i.e.: trash dumpster) a gate or gates shall be permitted on one side. Said gate(s) shall be kept closed to provide full 4-sided screening. Screening shall be one foot (1'-0") higher than service structure but shall not be required to exceed 8'-0" in height (6'-0" height for walls and fences). If walls or fences are used, supplemental landscaping will be required. Provide 36" height minimum plantings at 5'-0" maximum spacing around the enclosed portion of the perimeter screen. Curbing and/or bollards are to be installed around any trash disposal or waste collection unit a minimum of 2'-0" within the screening material to prevent damage to the screening when the container is moved or emptied. Electric and gas service shut-off locations shall be landscaped on the sides only to permit quick identification and access by emergency personnel. (1136.06)
- Tree Planting Typical. All ropes and burlap, and 50% wire cage of the burlap shall be removed from the trees prior to the City's landscape inspection.

**PLAN NOTES**

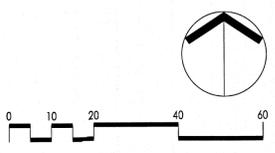
- 1136.06 (a2): for parking lots exceeding 7,000 square feet or 25 cars; Option A requires a 15' minimum (frontage) parking and/or drive aisle set-back with a continuous 3'-0" height minimum evergreen hedge.
- A. East Property line - frontage (Buckeye Parkway): 215 lineal feet  
 Existing: Transplant 10 shrubs to new location on site  
 Provided: 10 transplanted evergreen shrubs, and 32 new evergreen shrubs
- B. North, South, and West: Parking spaces that abut setback have been screened.
- 1136.06 (b3): Rear and Side Yards Adjacent Compatible Use Districts; One 2" caliper large or medium class tree and two 18" height deciduous shrubs are to be planted every 40 lineal feet of property line for all vehicular use areas.
- A. North, South, and West Property lines: 580 lineal feet  
 Required: 15 trees and 30 shrubs  
 Provided: 15 shade trees and 30 shrubs
- 1136.06 (d): Interior Vehicular Use Area: Each peninsula, island, aisle end or island or planting area to contain at least one tree.  
 Required: 8 islands = 8 trees  
 Provided: 8 trees
- 1136.08 Screening of Service Structures;  
 Plan complies with dumpster screening requirements
- 1136.09 (a)(2): Landscape abutting a structure  
 One tree for every 50 lineal feet of building with a minimum 64 square foot landscaped area containing shrubs, ground covers, ornamentals etc.  
 Required: 350 lineal feet = 7 trees and 448 square feet of landscaped area  
 Provided: 7 trees and 451 square feet of landscaped area
- Freestanding signage: A minimum 2 foot wide foundation planting around entire perimeter. Plan complies.
- 1136.10: Preservation of trees and wooded areas.  
 All trees along Buckeye Parkway shall be preserved and protected with a three foot high orange construction fence. Install fence on the project side of the landscaping along the entire frontage of Buckeye Parkway. Refer to plan for location. Signage shall be secured to the fencing every twenty feet (20'), shall be a minimum size of eight and one half inches (8 1/2") by eleven inches (11") and shall include readable text stating "Preservation area, no construction or encroachment permitted under Section 1136, City of Grove City".
- General Note:  
 Any damage done to the existing irrigation along Buckeye Parkway is the responsibility of the contractor to repair. Prior to the start of construction, contact the City of Grove City at least 72 hours in advance to mark the irrigation lines.

**PLANT INSTALLATION NOTES**

- Contractor to verify with the owner's representative and utility companies the locations of the existing utilities prior to start. Call Ohio Utilities Protection Services at (800)362-2764. Contractor to repair all damages to existing utilities, curbs, pavements, etc. resulting from landscape installations which occur during the construction of the project.
- Plant material shall be furnished in the quantities and/or spacing as shown or noted. In case of discrepancies between the plan and the plant list, the plan shall dictate.
- Contractor shall verify sizes and locations of all site elements and immediately inform the owner's representative if any discrepancy between the drawings and/or specifications and actual conditions. No work shall be done in any area where there is a discrepancy without owner's representative approval.
- Base information provided by Advanced Civil Design
- Contractor shall be responsible for all finish grading in the project required to provide a proper seed and planting bed.
- Contractor shall provide the following soil amendments:  
 Soil Amendment: Com-Til organic compost (or equal)  
 7000 State Route 104  
 South Lockbourne, Ohio 43137  
 (614) 645-3152
- Wetland Soil Mix: Roingarden 531 Soil Mixture  
 Kurtz Brothers Soil  
 6279 Houchard Rd, Dublin, OH  
 (614) 873-2000  
 See Specifications
- Turf & Shrub Bed areas: Spread 3" of Com-Til over new landscape areas and incorporate into the top 8" of the soil by mechanical tiller.
- Trees and Shrubs: Mix 30% Com-Til to 70% existing soil from plant pit excavation. If excavated soil is not suitable, supplement with imported topsoil.
- All plant material to meet or exceed American Standard for Nursery Stock, 1986 edition, as set forth by American Association of Nurserymen.
- All plant materials subject to inspection prior, during and after installation. Any plant not meeting the requirements will be cause for rejection by the owner's representative. All rejected plants shall be immediately removed and disposed of by the contractor and the replacement material shall be provided.
- All substitutions and plan changes must be approved by owner's representative prior to any action taken. Trees shall be protected and handled carefully at all times during transport & handling to prevent drying of tree or root ball by winds and to prevent any damage or breakage of the root ball. Bark shall be protected from bruising or abrasion.
- Water trees immediately after planting and continue to water until final acceptance by owner's representative.
- Plant locations and beds shall be located by contractor and approved by owner's representative prior to plant installation.
- Bed line to be 18" from base of plant material unless otherwise indicated on the drawings.
- All shrub and bed areas to be mulched with two inches (2") depth minimum shredded hardwood mulch. Submit sample to owner for approval.
- All areas outside of planting beds shall be seeded or sodded as shown on the plans and noted in the technical specifications.
- Finished turf (sod or seed) to be flush with top of adjacent curb or walk. Coordinate with owner's representative in field as required.
- The contractor shall guarantee all trees, shrubs and ground covers for a period of one (1) year from date of final acceptance. Replace material within seven (7) days of notification of the owner's representative.
- Perform cleaning during installation of landscape work and upon completion. Remove from site all excess landscape related material, soil debris and equipment. Repair damage resulting from landscaping operations. Sweep and hose down paved surfaces affected by landscaping operations. Coordinate with owner's representative and other contractors for final cleanup prior to cleaning.
- Maintenance: The landscape contractor shall maintain the completed landscape and irrigation systems until the date of final acceptance.
  - Mowing - Minimum once per week, except in future expansion areas which will require a minimum of once per three weeks.
  - Trimming - Shrubs, trees, ground covers, perennials, and annuals, minimum two times per year or as required.
  - Fertilizing - Apply fertilizer at a rate equal to 1 lb. of actual nitrogen/1000 s.f. in the spring and fall to all turf and plantings except in future expansion turf areas (where applicable).
  - Bed Edging - Edge all beds by hand, spade at least two times per year and top-mulch with dress wood mulch in fall and spring.

- LEGEND:**
- EX. ST. LIGHT
  - EXIST. SHRUBS
  - EXIST. TREES W/ SIZE SHOWN
  - EXIST. OR PROPOSED VALVE

- PLANT KEY:**
- EXISTING TREE TO BE TRANSPLANTED SEE PLAN FOR NEW LOCATION
  - PROPOSED SHADE TREE WITH MULCH RING, AS INDICATED
  - PROPOSED DECIDUOUS SHRUB
  - PROPOSED EVERGREEN SHRUB
  - PROPOSED PERENNIAL



2 WORKING DAYS BEFORE YOU DIG  
 OHIO UTILITIES PROTECTION SERVICE  
 CALL TOLL FREE 800-362-2764

**PLANT LIST**

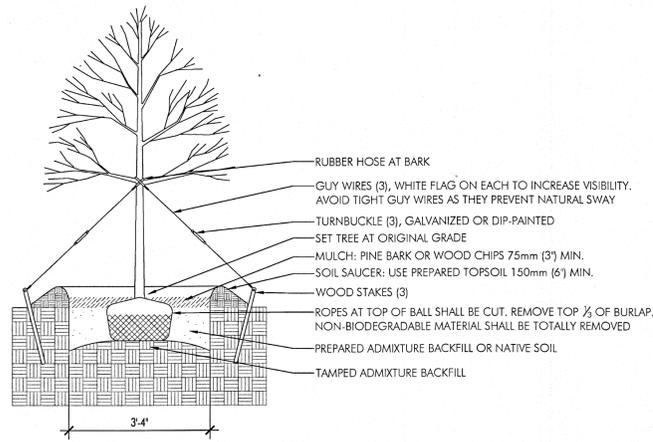
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	COND.	SPACING
<b>DECIDUOUS TREES</b>					
AC AB	Acer x freemanii 'Autumn Blaze'	Autumn Blaze Maple	2' cal.	B&B	As Shown
AM LA	Amelanchier lamarkkii	Juneberry	2' cal.	B&B	As Shown
GL TR	Gleditsia t.f.i. 'Imperial'	Imperial Honeylocust	2' cal.	B&B	As Shown
MA ST	Malus sargentii 'Tina'	Sargent Tina Crabbapple	#15 cont.	B&B	As Shown
QU RU	Quercus Rubrum	Red Oak	2' cal.	B&B	As Shown
TI CO	Tilia cordata	Littleleaf Linden	2' cal.	B&B	As Shown
ZE SE	Zelkova serrata	Japanese Zelkova	2' cal.	B&B	As Shown
<b>SHRUBS</b>					
AE PA	Aesculus parviflora	Botlebrush Buckeye	3' hgt.	Cont.	As Shown
JC SP	Juniperus chinensis 'Spartan'	Spartan Juniper	3' hgt.	Cont.	As Shown
JC SG	Juniperus chinensis 'Sea Green'	Sea Green Juniper	3' hgt.	Cont.	As Shown
RH GL	Rhus glabra	Smooth Sumac	3 gal.	Cont.	As Shown
TX HI	Taxus x media 'Hicksii'	Hicks Yew	3' hgt.	Cont.	As Shown
VB CA	Viburnum carlesii	Koreanspice Viburnum	3 gal.	Cont.	As Shown
<b>PERENNIALS &amp; ORNAMENTAL GRASSES</b>					
EC PU	Echinacea purpurea	Purple Coneflower	1 gal.	Cont.	As Shown
HC SO	Heimerocallis 'Stella de Oro'	Stella de Oro Daylily	1 gal.	Cont.	As Shown
MS RI	Miscanthus sinensis 'Rigoletto'	Rigoletto Maiden Grass	1 gal.	Cont.	As Shown

PROJECT NAME:  
 PARKWAY CENTER  
 4145 BUCKEYE PARKWAY  
 GROVE CITY, OHIO

**POD design**  
 Columbus  
 100 Northwoods Blvd, Suite A  
 Columbus, Ohio 43235  
 p 614.255.3399  
 f 614.255.3999  
 PODdesign.net

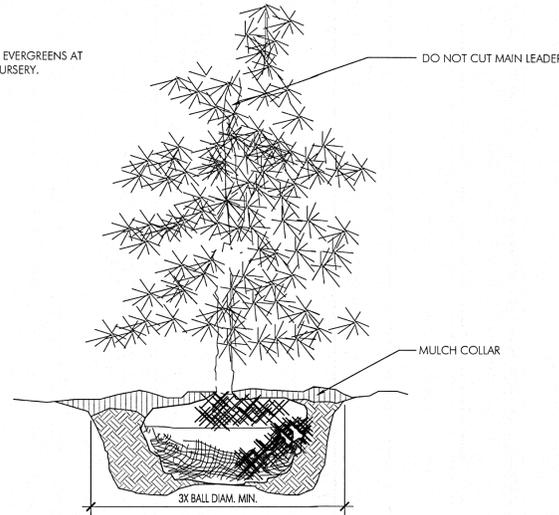
REGISTERED LANDSCAPE ARCHITECT  
 EXPIRATION DATE: 12/31/2016

LANDSCAPE DETAILS			
SCALE	DATE	DRAWN BY	DWG. NO.
AS SHOWN	08/28/2015	MDL	4/6

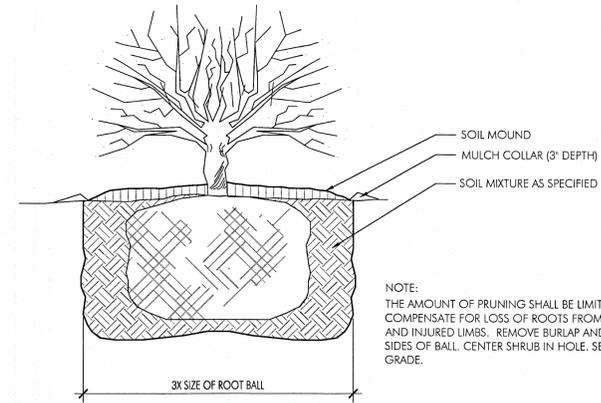


**1. Staked Tree**  
 1/2"=1'-0"

NOTE: PLANT TREES, SHRUBS, & EVERGREENS AT SAME GRADE AS GROWN IN NURSERY.

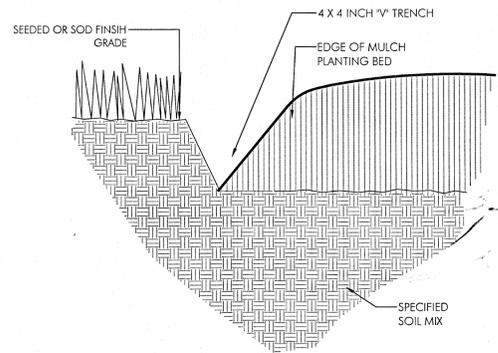


**2. Evergreen Planting**  
 N.T.S.

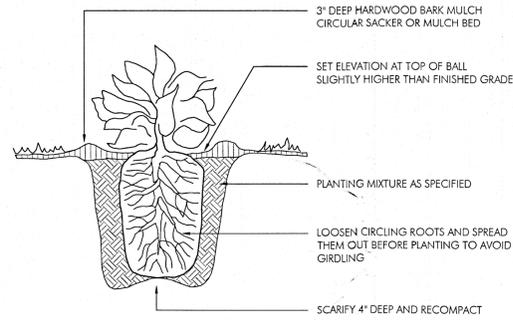


NOTE:  
 THE AMOUNT OF PRUNING SHALL BE LIMITED TO 1/3 OF THE BRANCHES TO COMPENSATE FOR LOSS OF ROOTS FROM TRANSPLANTING. REMOVE DEAD AND INJURED LIMBS. REMOVE BURLAP AND WIRE OR TWINE FROM TOP AND SIDES OF BALL. CENTER SHRUB IN HOLE. SET TOP OF BALL 1-3" ABOVE FINISH GRADE.

**3. Shrub Planting**  
 N.T.S.

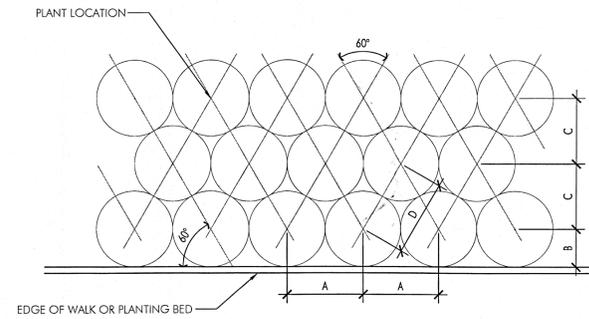


**4. Mulch Edge Treatment at Lawn**  
 N.T.S.



**5. Perennial Planting**  
 N.T.S.

SPACING	A	B	C	D	A=
12"	12"	6"	10"	12"	SPACING
18"	18"	8"	15"	18"	B= SP/2
24"	24"	10"	20"	24"	C= SP/1.2
36"	36"	18"	31"	36"	D= SPACING
48"	48"	21"	41"	48"	



**6. Perennial Spacing**  
 N.T.S.

PROJECT NAME:  
 PARKWAY CENTER  
 4145 BUCKEYE PARKWAY  
 GROVE CITY, OHIO



**POD design**

**Columbus**  
 100 Northwoods Blvd, Suite A  
 Columbus, Ohio 43235  
 p 614.255.3399  
 f 614.255.3999

PODdesign.net

REGISTERED LANDSCAPE ARCHITECT  
 EXPIRATION DATE: 12/31/2016

LANDSCAPE DETAILS

SCALE AS SHOWN	DATE 08/28/2015	DRAWN BY MDL	DWG. NO. 5/6
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SECTION 32 93 00 - PLANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Plants.
2. Planting soils.
3. Tree stabilization.

Related Sections:

1.3 DEFINITIONS

A. Backfill: The earth used to replace or the act of replacing earth in an excavation.

B. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with ball size not less than [sizes indicated] [diameter and depth recommended by ANSI Z60.1 for type and size of plant required]; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.

C. Balled and Potted Stock: Plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than [sizes indicated] [diameter and depth recommended by ANSI Z60.1 for type and size of plant required].

D. Bare-Root Stock: Plants with a well-branched, fibrous-root system developed by transplanting or root pruning, with soil or growing medium removed, and with not less than minimum root spread according to ANSI Z60.1 for type and size of plant required.

E. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.

F. Duff Layer: The surface layer of native topsoil that is composed of mostly decayed leaves, twigs, and detritus.

G. Fabric Bag-Grown Stock: Healthy, vigorous, well-rooted plants established and grown in-ground in a porous fabric bag with well-established root system reaching sides of fabric bag. Fabric bag size is not less than diameter, depth, and volume required by ANSI Z60.1 for type and size of plant.

H. Finish Grade: Elevation of finished surface of planting soil.

I. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

J. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.

K. Pests: Living organisms that occur where they are not desired, or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

L. Planting Area: Areas to be planted.

M. Planting Soil: Standardized topsoil; existing, native surface topsoil; existing, in-place surface soil; imported topsoil; or manufactured topsoil that is modified with soil amendments and herbicides to produce a soil mixture best for plant growth.

N. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.

O. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.

P. Stem Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.

Q. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

R. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

S. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated, including soils.
1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
2. Pesticides and Herbicides: Include product label and manufacturer's application instructions specific to the Project.

B. Samples for Verification: For each of the following:
1. Trees and Shrubs: Three samples of each variety and size delivered to the site for review. Maintain approved samples on-site as a standard for comparison.
2. Mulch: 1-pint (0.5-liter) volume of each organic mulch required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.

3. Accessories: Manufacturer's standard size, to verify color selected.
C. Qualification Data: For qualified Landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.

D. Product Certificates: For each type of manufactured product, from manufacturer, and complying with the following:
1. Manufacturer's certified analysis of standard products.
2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.

E. Material Test Reports: For standardized ASTM D 5268 topsoil, existing native surface topsoil, existing in-place surface soil, and imported or manufactured topsoil.
F. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of plants during a calendar year. Submit before start of required maintenance periods.

G. Warranty: Sample of special warranty.
1.5 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of plants.

1. Professional Membership: Installer shall be a member in good standing of either the Professional Landcare Network or the American Nursery and Landscape Association.

2. Experience: Three years' experience in landscape installation in addition to requirements in Division 01 Section "Quality Requirements."

3. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.

4. Personnel Certifications: Installer's field supervisor shall have certification in one of the following categories from the Professional Landcare Network:
a. Certified Landscape Technician - Exterior, with installation specialty area(s), designated CLT-Exterior.
b. Certified Landscape Technician - Interior, designated CLT-Interior.
c. Certified Ornamental Landscape Professional, designated COLP.

5. Pesticide Applicator: State licensed, commercial.
B. Soil-Testing Laboratory Qualifications: An independent or university laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.

C. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; sodium absorption ratio; deleterious material; pH; and mineral and plant-nutrient content of the soil.

1. Testing methods and written recommendations shall comply with USDAs Handbook No. 60.
2. The soil-testing laboratory shall oversee soil sampling; with depth, location, and number of samples to be taken per instructions from Architect. A minimum of three representative samples shall be taken from varied locations for each soil to be used or amended for planting purposes.

3. Report suitability of tested soil for plant growth.
a. Based upon the test results, state recommendations for soil treatments and soil amendments to be incorporated. State recommendations in weight per 1000 sq. ft. (92.9 sq. m) or volume per cu. yd. (0.76 cu. m) for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.

b. Report presence of problem salts, minerals, or heavy metals, including aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, and vanadium. If such problem materials are present, provide additional recommendations for corrective action.

D. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.

E. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.
1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches (150 mm) above the root flare for trees up to 4-inch (100-mm) caliper size, and 12 inches (300 mm) above the root flare for larger sizes.

2. Other Plants: Measure with stems, petioles, and foliage in their normal position.
F. Plant Material Observation: Architect may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Architect retains right to observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.

1. Notify Architect of sources of planting materials seven days in advance of delivery to site.
1.6 PREINSTALLATION CONFERENCE: Conduct conference at Project site.

G. DELIVERY, STORAGE, AND HANDLING
1. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws if applicable.

B. Bulk Materials:
1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.

3. Accompany each delivery of bulk fertilizers, lime(s), and soil amendments with appropriate certificates.
C. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.

D. Handle planting stock by root ball.
E. Store bulbs, corms, and tubers in a dry place at 60 to 65 deg F (16 to 18 deg C) until planting.
F. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.

1. Heel-in bare-root stock. Soak roots that are in dry condition in water for two hours. Reject dried-out plants.
2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
3. Do not remove container-grown stock from containers before time of planting.

4. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly-wet condition.
1.7 PROJECT CONDITIONS

A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.

B. Interruption of Existing Services or Utilities: Do not interrupt services or utilities to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary services or utilities according to requirements indicated:
1. Notify Owner no fewer than two days in advance of proposed interruption of each service or utility.
2. Do not proceed with interruption of services or utilities without Owner's written permission.

C. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

D. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.
1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

1.8 WARRANTY
A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.

1. Failures include, but are not limited to, the following:
a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner, or incidents that are beyond Contractor's control.
b. Structural failures including plantings falling or blowing over.
c. Faulty performance of tree stabilization and edgings.

2. Warranty Periods from Date of Substantial Completion:
a. Trees, Shrubs, Vines, and Ornamental Grasses: 12 months.
b. Ground Covers, Biennials, Perennials, and Other Plants: 12 months.
3. Include the following remedial actions as a minimum:
a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.

b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
c. A limit of one replacement of each plant will be required except for losses or replacements due to failure to comply with requirements.
d. Provide extended warranty for period equal to original warranty period, for replaced plant material.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant Schedule or Plant Legend shown on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

1. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk (included bark); crossing trunks; cut-off limbs more than 3/4 inch (19 mm) in diameter; or with stem girdling roots will be rejected.
2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.

B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls.
C. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

D. If formal arrangements or consecutive order of plants is shown on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.
2.2 ORGANIC SOIL AMENDMENTS

A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8
B. Sphagnum Peat: Partially decomposed sphagnum peat moss, finely divided or granular texture, with a pH range of 3.4 to 4.8.
C. Muck Peat: Partially decomposed moss peat, native peat, or reed-sedge peat, finely divided or of granular texture, with a pH range of 6 to 7.5, and having a water-absorbing capacity of 1100 to 2000 percent.

D. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture and free of chips, stones, sticks, soil, or toxic materials.
E. Com-Fit organic compost, 7000 State Route 104 South Lockbourne, Ohio 43137 (614) 645-3152 or Clean, well composted dairy cow manure to be approved by owner's representative.
2.3 FERTILIZERS

A. Fertilizer:
1. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 4 percent nitrogen and 10 percent phosphoric acid.
2. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.

3. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium.
4. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium.

2.4 PLANTING SOILS

A. ASTM D 5268, pH range of 5.5 to 7, a minimum of 4 percent organic material content; free of stones 1" or larger in any dimension and other extraneous materials harmful to plant growth.
1. Topsoil Source: Reuse surface soil stockpiled on-site and supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Verify suitability of stockpiled surface soil to produce topsoil.

2. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources.
2.5 MULCHES

A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
1. Type: Shredded hardwood.
2. Size Range: 3 inches (76 mm) maximum, 1/2 inch (13 mm) minimum.
3. Color: Natural.

B. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch (25-mm) sieve; soluble salt content of 2 to 5 decilequivalents/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
1. Organic Matter Content: 50 to 60 percent of dry weight.

2.6 PESTICIDES
A. General: Pesticide registered and approved by EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
B. Pre-Emergent Herbicide (Selective and Non-Selective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.

C. Post-Emergent Herbicide (Selective and Non-Selective): Effective for controlling weed growth that has already germinated.
2.7 TREE STABILIZATION MATERIALS

A. Root-Ball Stabilization Materials:
1. Upright Stakes and Horizontal Hold-Down: Rough-sawn, sound, new hardwood or softwood, free of knots, holes, cross grain, and other defects, 2-by-2-inch nominal (38-by-38-mm actual) by length indicated; stakes pointed at one end.
2. Wood Screws: ASME B18.6.1.
3. Proprietary Root-Ball Stabilization Devices: Proprietary at- or below-grade stabilization systems to secure each new planting by root ball; sized per manufacturer's written recommendations unless otherwise indicated.

A. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
1) Border Concepts, Inc.; Tomahawk Tree Stabilizers.
2) Foresight Products, LLC; Duckbill Rootball Fixing System.
3) Tree Staple, Inc.; Tree Staples.

2.8 MISCELLANEOUS PRODUCTS
A. Burlap: Non-synthetic, biodegradable.
B. Planter Drainage Gravel: Washed, sound crushed stone or gravel complying with ASTM D 448 for Size No. 8.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive plants for compliance with requirements and conditions affecting installation and performance.
1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.

2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
3. Suspend soil spreading, grading, and filling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to obtain the required results.
4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.

B. Proceed with installation only after unsatisfactory conditions have been corrected.
C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.
3.2 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.
B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

C. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Architect's acceptance of layout before excavating or planting. Make minor adjustments as required.
D. Stake locations of individual trees and shrubs and outline areas for multiple plantings.

E. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.

F. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.
3.3 PLANTING AREA ESTABLISHMENT

A. Loosen subgrade of planting areas to a minimum depth of 6 inches (150 mm). Remove stones larger than 1 inch (25 mm) in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

1. Apply fertilizer directly to subgrade before loosening.
2. Thoroughly blend planting soil off-site before spreading or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil.
a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
b. Mix lime with dry soil before mixing fertilizer.

3. Spread planting soil to a depth of 6 inches (150 mm) but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
a. Spread approximately one-half the thickness of planting soil over loosened subgrade. Mix thoroughly into top 2 inches (50 mm) of subgrade. Spread remainder of planting soil.
b. Finish grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

C. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.
3.4 EXCAVATION FOR TREES AND SHRUBS

A. Planting Pits and Trenches: Excavate circular planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are not acceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.

1. Excavate approximately three times as wide as ball diameter for balled and burlapped stock.
2. Excavate at least 12 inches (300 mm) wider than root spread and deep enough to accommodate vertical roots for bare-root stock.
3. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.

4. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
5. Maintain required angles of slope of adjacent materials as shown on the Drawings. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.

6. Maintain supervision of excavations during working hours.
7. Keep excavations covered or otherwise protected when unattended by Installer's personnel.
8. If drain tile is shown on Drawings or required under planting areas, excavate to top of porous backfill over tile.

B. Obstructions: Notify Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
C. Drainage: Notify Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.
D. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.5 TREE, SHRUB, AND VINE PLANTING

A. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.

B. Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
C. Set balled and burlapped stock plumb and in center of planting pit or trench with root flare 1 inch (25 mm) above adjacent finish grades.

1. Use planting soil for backfill.
2. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.

3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
4. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside the root ball about 1 inch (25 mm) from tips; do not place tablets in bottom of the hole.

5. Continue backfilling process. Water again after placing and tamping final layer of soil.
D. Set container-grown stock plumb and in center of planting pit or trench with root flare 1 inch (25 mm) above adjacent finish grades.

1. Use planting soil for backfill.
2. Carefully remove root ball from container without damaging root ball or plant.
3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.

4. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside the root ball about 1 inch (25 mm) from tips; do not place tablets in bottom of the hole.

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3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.

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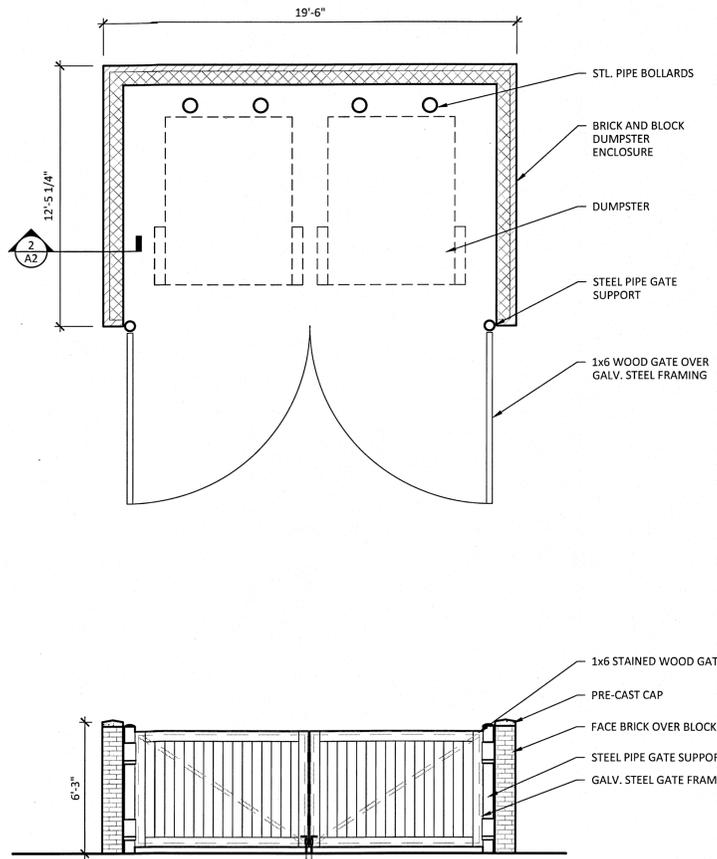
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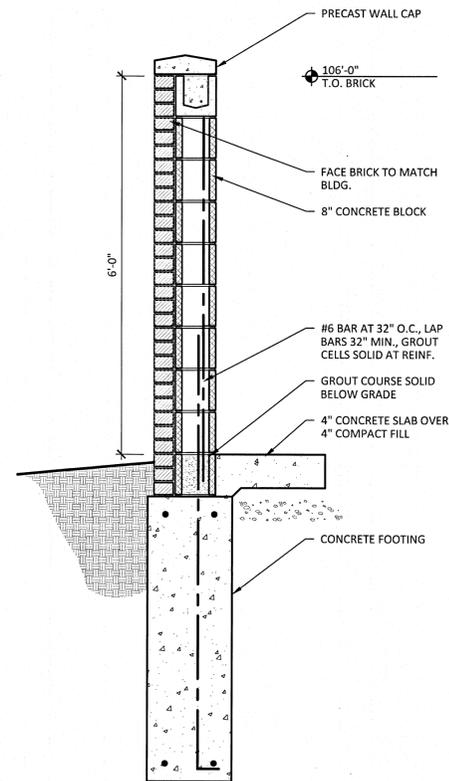
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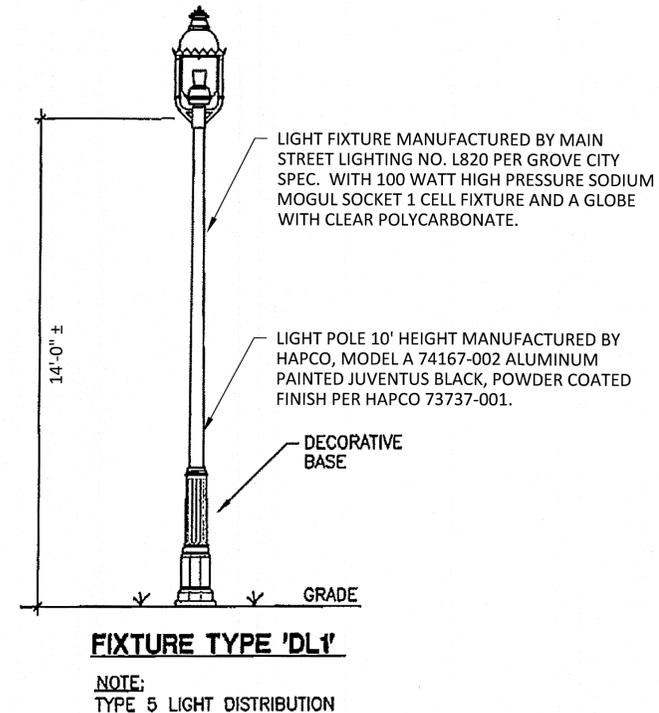
1. Use planting soil for backfill.
2. Carefully remove root ball from container without damaging root ball or plant.
3. Backfill around root ball in layers, tamping



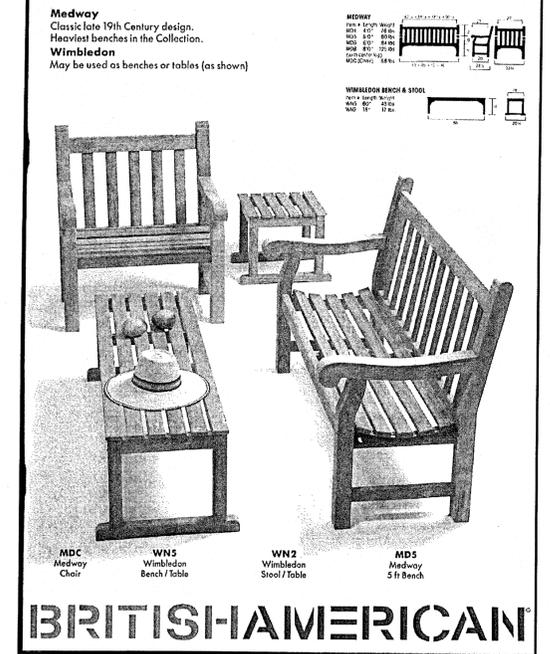
1  
A3  
DUMPSTER PLAN AND ELEVATION  
1/4" = 1'-0"



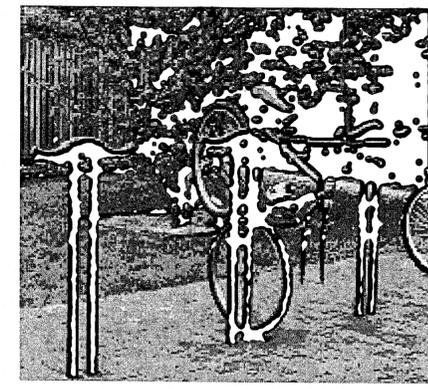
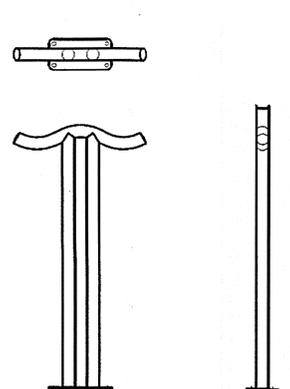
2  
A3  
DUMPSTER WALL SECTION  
3/4" = 1'-0"



3  
A3  
GAS LIGHT  
N.T.S.



4  
A3  
BRITISH-AMERICAN  
TYPICAL BENCH (PAINTED BLACK)  
REFERENCE LANDSCAPE PLAN FOR LOCATIONS  
BENCH DETAIL  
N.T.S.

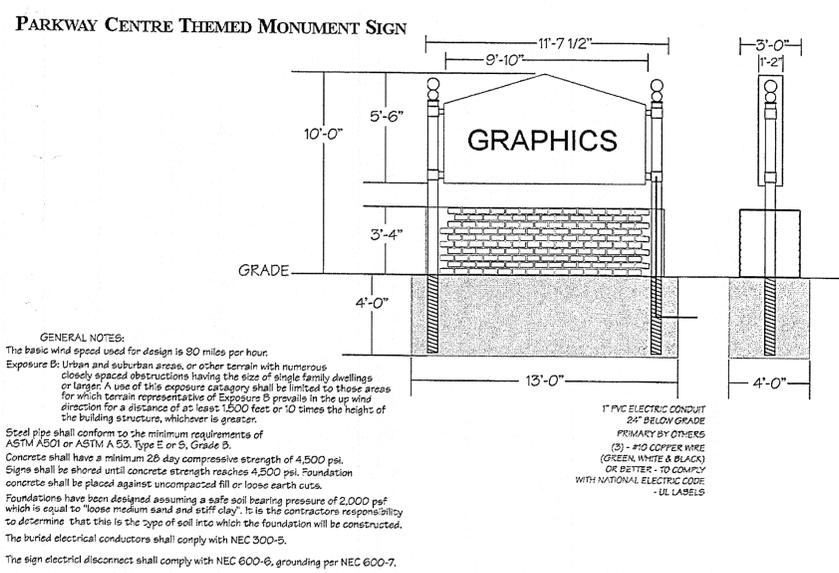


landscape forms  
431 LAVINALE AVE. PHO: 800-221-2545  
KALAMAZOO, MI 49048 FAX: 269-391-3455

TITLE: 21-1/2" W X 43H - PI RACK - SURFACE MOUNT  
DESIGN: PI RACK  
PATENT: 0374,849  
FILE: P1950  
DATE: 08-26-02  
AUTHOR: LAD

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5  
A3  
TYPICAL BIKE RACK (PAINTED BLACK)  
REFERENCE LANDSCAPE PLAN FOR LOCATIONS



6  
A3  
PARKWAY CENTRE THEMED MONUMENT SIGN  
N.T.S.