FRONT STREET SUMMIT DD

PARKING LOT EXPANSION

CITY OF CUYAHOGA FALLS

COUNTY OF SUMMIT

STATE OF OHIO

STATE OF OHIO
DENNIS W. STOFFER
E-76698
REGISTERED PROFESSIONAL ENGINEER

Dennis W. Stoffer DATE 2-11-2021
Dennis W. Stoffer Reg. Engineer No. 76698

APPROVED BY THE CITY OF CUYAHOGA FALLS

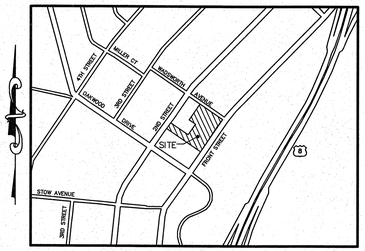
Anthony L Zumbo DATE 2/11/2021
Anthony L. Zumbo, P.E., P.S. Service Director

Tony V. Demasi DATE 2/11/2021
Tony V. Demasi, P.E. City Engineer

DESIGN ENGINEER

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET STREET
SUITE 201
FAIRLAWN, OHIO 44333
(330) 836-6661

FEBRUARY, 2021



LOCATION MAP
NO SCALE

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811 Know what's **below.** **Call** before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:

CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR; NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

DWG FILE: F:\Front Street\Old Dwgs\General Sheets.dwg

GENERAL:

1. WHERE SECIFIED, THE 2019 STATE OF OHIO DEPARTMENT OF TRANSPORATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) (ODOT ITEM NUMBERS) INCLUDING SUPPLEMENTAL SPECIFICATIONS (SS) AND STANDARD CONSTRUCTION DRAWINGS (SCD) SHALL APPLY EXCEPT AS MODIFIED OR EXPANDED HEREIN OR IN THE TECHNICAL SPECIFICATIONS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH LOCAL BUILDING AND ZONING CODES AND REGULATIONS. IN THE EVENT THAT CONSTRUCTION PLANS AND LOCAL CODES AND REGULATIONS ARE INCONSISTENT, THE LOCAL CODES AND REGULATIONS SHALL SUPERSEDE THE CONSTRUCTION PLANS AND GOVERN.

3. THE USE OF EXPLOSIVE MATERIALS SHALL NOT BE ALLOWED ON THE PROJECT.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF ALL PERSONS, INCLUDING EMPLOYEES, AND PROPERTY.

5. IN THE EVENT THAT POTENTIAL ENVIRONMENTAL HAZARDS (E.G.: UNDERGROUND STORAGE TANKS, CONTAMINATED SOILS, WASTE DISPOSAL SITES, ETC), ARCHAEOLOGICAL REMAINS, OR HISTORIC OR PREHISTORIC HUMAN REMAINS ARE ENCOUNTERED, THE CONTRACTOR SHALL CEASE OPERATIONS IMMEDIATELY AND IMMEDIATELY CONTACT THE PROJECT OWNER.

6. PROJECT RELATED REMOVALS AND/OR ADMONISHMENTS SHALL NOT BEGIN UNTIL THE OWNER PROVIDES NOTICE TO PROCEED WITH SAID WORK. ANY ITEM REMOVAL THAT IS NOT SPECIFICALLY DESIGNATED IN THE PLANS, BUT IS REQUIRED FOR THE PROPOSED WORK TO BE COMPLETED, SHALL BE REMOVED BY THE CONTRACTOR.

7. ALL SURFACES INCLUDING DRAINAGE STRUCTURES, LANDSCAPING, PAVEMENTS, DRIVEWAYS, BERMS AND OTHER SURFACES DISTURBED DURING CONSTRUCTION OF THIS PROJECT SHALL BE RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR.

8. THE CONTRACTOR SHALL KEEP ALL STREETS, LANES AND PARKING AREAS ADJACENT TO THE PROJECT CLEAN AND FREE FROM AND DEBRIS, MUD AND/OR OTHER CONSTRUCTION EQUIPMENT AT ALL TIMES DURING THE PROJECT.

9. IT IS THE INTENTION OF THE PLANS TO PROVIDE AND REQUIRE A COMPLETED PROJECT READY FOR OPERATION. ANY WORK ITEMS OMITTED FROM THE PLANS WHICH ARE CLEARLY NECESSARY FOR THE COMPLETION OF SUCH WORK AND ITS APPURTENANCES SHALL BE CONSIDERED A PART OF SUCH WORK ALTHOUGH NOT DIRECTLY SPECIFIED OR CALLED FOR IN THE PLANS.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED BUILDING PERMITS, PAYING APPLICABLE PERMIT AND APPLICATIONS FEED, AND VERIFYING SETBACKS, DIMENSIONS, AND EXISTING CONDITIONS, INCLUDING EASEMENTS, PRIOR TO COMMENCEMENT OF WORK.

11. AGGREGATE BASE SHALL BE PER ITEM 304 AND SHALL BE LIMESTONE.

12. SIDEWALKS SHALL BE ITEM 608 – 4" AND 6" CONCRETE WALK.

13. CURBS SHALL BE PER ITEM 609 BY TYPE AS REFERENCED IN THE PLANS AND SHALL BE CONSTRUCTED PER SCD BP0-5.1.

14. TOPSOIL, SEEDING, MULCHING, AND FERTILIZER SHALL BE PER ITEM 659. GRASS SEED SHALL BE A CLASS 1 MIX.

15. AGGREGATE THAT IS USED TO BACKUP THE PROPOSED CONCRETE PAVEMENT AND CURBS SHALL BE #57 LIMESTONE OR PER LANDSCAPE PLAN DETAILS.

16. ALL PAVEMENT MARKINGS SHALL BE PER ODOT ITEM 631 AND SHALL BE ITEM 642 PAINT.

UTILITIES:

1. THE LOCATION OF THE UNDERGROUND UTIITES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C. THEY ARE APPROXIMATE ONLY, THE ENGINEER AND OWNER CANNOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL UTILITIES AS TO LINE & GRADE BEFORE STARTING ANY WORK.

UTILITY OWNERSHIPS

OWNERS:

1. A.T. & T.
   50 W. BOWERY STREET
   AKRON, OHIO 44308
   330-384-8057
2. DOMINION EAST OHIO GAS COMPANY
   320 SPRINGSIDE DRIVE
   SUITE 320
   AKRON, OHIO 44333
   330-664-2409
3. CITY OF CUYAHOGA FALLS
   2310 SECOND STREET
   CUYAHOGA FALLS, OHIO 44221
   330-971-8180
4. CHARTER COMMUNICATIONS
   1655 BRITTAIN ROAD
   AKRON, OHIO 44310
   330-630-9798

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING RESPECTIVE UTILITY COMPANIES FOR APPLICATIONS, PERMITS, AND SPECIFIC INSTALLATION REQUIREMENTS THAT ARE NOT SPECIFIED IN THESE PLANS PRIOR TO COMMENCEMENT OF PROJECT WORK. ALL FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

3. ALL EXISTING UTILITIES TO SURROUNDING PROPERTIES SHALL REMAIN IN SERVICE THROUGHOUT THE DURATION OF THE PROJECT.

4. THE SIZE & LOCATION, BOTH HORIZONTAL END VERTICAL, OF THE UNDERGROUND UTILITIES SHOWN HEREON, HAVE BEEN OBTAINED BY A SEARCH OF AVAILABLE RECORDS. VERIFICATION BY FIELD OBSERVATION HAS BEEN CONDUCTED WHERE PRACTICAL, HOWEVER, SPAGNUOLO & ASSOCIATES, LLC DOES NOT GUARANTEE THE COMPLETENESS NOR ACCURACY THEREOF.

PROTECTION OF EXISTING UTILITIES AND PIPES:

1. THE CONTRACTOR SHALL BE REQUIRED, TO DO EVERYTHING NECESSARY TO PROTECT, SUPPORT AND SUSTAIN ALL STORM SEWERS, WATER AND GAS PIPES, SERVICE PIPES, ELECTRIC LIGHTS, POWER AND TELEPHONE POLES, CONDUIT AND OTHER FIXTURES LAID ACROSS OR ALONG THE SITE OF THE WORK. THE COMPANY OR CORPORATION OWNING SAID PIPES, POLES OR CONDUITS MUST BE NOTIFIED OF THE SAME BY THE CONTRACTOR, BEFORE AND SUCH FIXTURES ARE REMOVED OR DISTURBED. IN CASE ANY OF THE SAID SEWER, GAS OR WATER PIPES, SERVICE PIPES, ELECTRICAL LIGHT, POWER AND TELEPHONE POLES, CONDUITS OR OTHER FIXTURES ARE DAMAGED THEY SHALL BE REPAIRED BY THE AUTHORITIES HAVING CONTROL OF THE SAME AT NO ADDITIONAL COST TO THE OWNER.

2. SHOULD IT BECOME NECESSARY TO CHANGE THE POSITION, OR TEMPORARILY REMOVE ANY STORM SEWER, SANITARY SEWER, ELECTRIC CONDUITS, WATER PIPES, GAS PIPES OR OTHER PIPES OR WIRES IN ORDER TO PERMIT THE CONTRACTOR TO USE A PARTICULAR METHOD OF CONSTRUCTION OR IN ORDER TO CLEAR THE STRUCTURES BEING BUILT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE LOCATION AND CIRCUMSTANCES AND SHALL CEASE WORK, IF NECESSARY UNTIL SATISFACTORY ARRANGEMENTS HAVE BEEN MADE BY THE OWNERS OF SAID PIPES OR WIRES TO PROPERTY CARE FOR THE SAME.

PROTECTION AND RESTORATION OF PROPERTY:

1. IF THE CONTRACTOR CAUSES ANY DIRECT OF INDIRECT DAMAGE OR INJURY TO PUBLIC OR PRIVATE PROPERTY BY ANY ACT, OMISSION, NEGLECT, OR MISCONDUCT IN THE EXECUTION OR THE NON-EXECUTION OF THE WORK, THEN IT MUST RESTORE, THE PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE THE DAMAGE OR INJURY AT NO ADDITIONAL COST TO THE OWNER.

2. IF MAILBOXES, ROAD, OR STREET NAME SIGNS AND SUPPORTS INTERFERE WITH THE WORK, THEN REMOVE AND ERECT THEM IN A TEMPORARY LOCATION DURING CONSTRUCTION IN A MANNER SATISFACTORY TO, AND AS DIRECTED BY THE OWNER OR REGULATORY AGENCY. AFTER COMPLETION OF THE WORK AND BEFORE FINAL ACCEPTANCE OF THE PROJECT, ERECT THE MAILBOXES, ROAD, OR STREET NAME SIGNS AND SUPPORTS IN THEIR ORIGINAL OR PERMANENT LOCATIONS ACCORDING TO THE PLANS UNLESS OTHERWISE DIRECTED BY THE OWNER OR REGULATORY AGENCY.

PROTECTION OF MONUMENTS, PROPERTY CORNER MARKER, ETC:

1. MONUMENTS, PROPERTY CORNER MAKERS, ETC,. SHALL NOT BE DISTURBED BY THE CONTRACTOR. IN THE EVENT IT IS NECESSARY TO REMOVE THESE ITEMS, THE CONTRACTOR SHALL, EMPLOY A REGISTERED SURVEYOR TO PROPERLY REFERENCE THE POINTS AND SHALL RESET SAME AFTER CONSTRUCTION HAS BEEN COMPLETED IN THE AREA AT NO ADDITIONAL COST TO THE OWNER.

EXCESS EXCAVATION MATERIAL:

1. ALL EXCESS EXCAVATION SURPLUS MATERIAL, REMOVED PAVEMENT, AND RUBBISH SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR. PROJECT EXCAVATION SHALL BE PER ODOT ITEM 203.

EMBANKMENT:

1. PROJECT EMBANKMENT AND ASSOCIATED COMPACTION SHALL BE PER ODOT ITEM 203, UNLESS OTHERWISE SPECIFIED IN CONSTRUCTION PLANS.

ROUNDING:

1. SLOPES SHALL BE ROUNDED EVEN THOUGH OTHERWISE SHOWN IN PROJECT GRADING PLANS.

COMPACTION:

1. COMPACTION REQUIREMENTS FOR MATERIALS SHALL BE PER APPLICABLE ODOT ITEM NUMBERS (DESIGNATED WITHIN THESE PLANS).

SAWCUTS:

1. ALL REQUIRED SAWCUTS ON THE PROJECT SHALL BE FULL DEPTH SO THAT THE REMOVAL RESULTS IN A CLEAN, FLUSH JOIN AT THE VERTICAL SURFACE OF THE REMAINING.

CROSSING AND CONNECTIONS TO EXISTING PIPES AND UTILITIES:

1. WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AND EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING SEWER OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

2. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

3. IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

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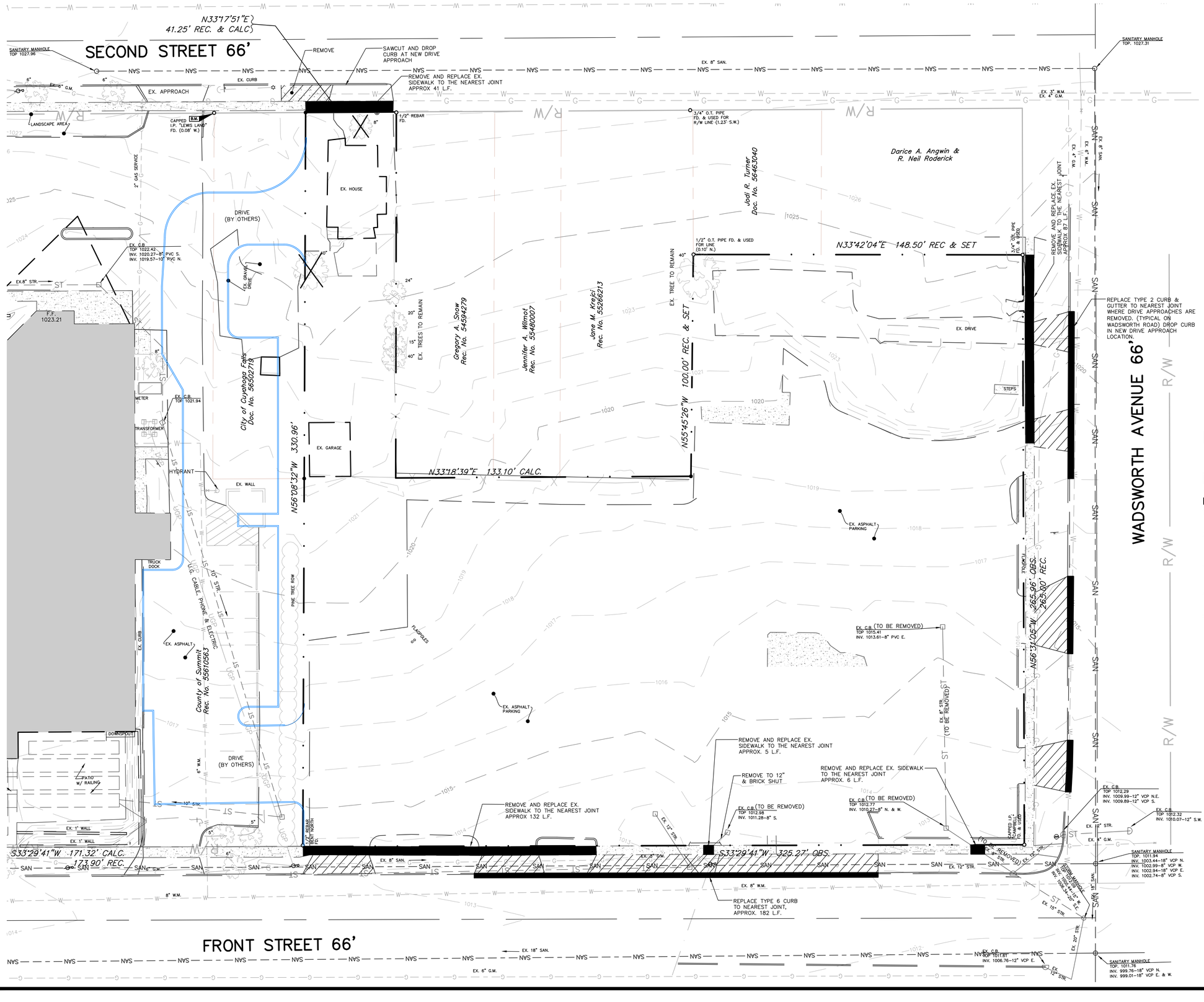
FRONT STREET SUMMIT DD PARKING LOT EXPANSION

GENERAL NOTES

CITY OF CUYAHOGA FALLS

DWG FILE: F:\Front Street\Sd Dwgs\General Sheets\dwg (Notes)
DRAWN BY: TG
DATE: 2/10/2021
DESIGNED BY: DWS
REVISIONS: DATE:
REVISIONS: DATE:
REVISIONS: DATE:

C-101



BASIS OF BEARINGS:
OHIO STATE PLANE COORDINATE SYSTEM, NAD 83, OHIO NORTH ZONE (ODOT CORS)

B.M. ~ TOP OF CAPPED IRON PIN 40' FEET SOUTH OF S.W. PROPERTY CORNER.
ELEV.~ 1027.89

LEGEND

- IRON PINS TO BE SET AT ALL LOT CORNERS (WITH IDENTIFICATION CAPS 7604)
- IRON PIN FOUND AS NOTED
- MONUMENT BOX WITH IRON PIN FOUND AS NOTED
- VALVE
- LIGHT POLE
- SIGN
- UTILITY POLE
- GUY WIRE
- HYDRANT
- STOP SIGN
- CONCRETE
- TREE TO BE REMOVED
- DRIVE APPROACHES TO BE REMOVED

NOTES:

1. REMOVE ALL PAVEMENT, CURBS, FENCING AND SIDEWALKS FROM THE PROPERTY.
2. BUILDINGS WERE PREVIOUSLY REMOVED FROM THE PROPERTY AND UTILITY SERVICES WERE CAPPED AT THE RIGHT OF WAY.
3. COMPLETELY REMOVE THE STRUCTURES AT 2365 SECOND STREET. FILL AND COMPACT ANY EXCAVATION.
4. REMOVE ALL EXISTING DRIVE APPROACHES WITHIN THE LIMITS OF THIS PROJECT.
5. TREE LAWN RESTORATION SHALL BE IN ACCORDANCE WITH ODOT 659. COORDINATE WITH LANDSCAPE PLAN.

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FRONT STREET SUMMIT DD PARKING LOT EXPANSION

EXISTING CONDITIONS AND DEMOLITION PLAN

CITY OF CUYAHOGA FALLS

DWG FILE: F:\FRONT STREET\DD PKWY\BASE\FRONT DESIGN
DRAWN BY: TG
DATE: 2/10/2021
DESIGNED BY: DWS
REVISION: DATE:
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C-102

SECOND STREET 66'

FRONT STREET 66'

WADSWORTH AVENUE 66'

N33°17'51"E 41.25' REC. & CALC.

N33°42'04"E 148.50' REC & SET

N55°45'26"W 100.00' REC. & SET

N33°18'39"E 133.10' CALC.

S33°29'41"W 171.32' CALC.
171.90' REC.

S33°29'41"W 325.27' OBS.

N56°08'32"W 330.96'

N56°31'05"W 265.96' OBS.
265.00' REC.

SANITARY MANHOLE TOP 1027.96

SANITARY MANHOLE TOP 1027.31

SAWCUT AND DROP CURB AT NEW DRIVE APPROACH

EX. APPROACH

EX. CURB

LANDSCAPE AREA

CAPPED I.P. "LEWIS LAND" FD. (0.08' W.)

1/2" REBAR FD.

3/4" O.T. PIPE FD. & USED FOR R/W LINE (1.23' S.W.)

1/2" O.T. PIPE FD. & USED FOR LINE (0.10' N.)

3/4" O.T. PIPE FD. & USED

1" GAS SERVICE

DRIVE (BY OTHERS)

EX. C.B. TOP 1022.42 INV. 1020.27–8" PVC S. INV. 1019.57–10" PVC N.

EX. 6" STR.

F.F. 1023.21

EX. GRAVEL DRIVE

EX. C.B. TOP 1021.94

METER

TRANSFORMER

HYDRANT

EX. WALL

EX. ASPHALT

TRUCK DOCK

DOWNSPOUT

PATIO W/ RAILING

EX. 1" WALL

EX. 10" STR.

EX. 8" STR.

EX. 12" STR.

EX. 15" STR.

EX. 20" STR.

EX. 18" SAN.

EX. 8" SAN.

EX. 6" SAN.

EX. 3" G.M.

EX. 4" G.M.

EX. 8" W.M.

EX. 6" W.M.

EX. 3" W.M.

EX. 4" G.M.

U.G. CABLE, PHONE & ELECTRIC

PINE TREE ROW

11.5'

58' (NO CURB)

106.20'

87.00'

47.60'

15.20'

30'

5'

6' SIDEWALK

6' SIDEWALK (6" THICK)

FUTURE SIDEWALK

DROP CURBS

ONE WAY

ODOT TYPE 6 CURB (TYP.)

21.71'

8.44'

14'

23'

18'

9'

R=4.5'

13.83'

PROP. 12" STR.

PROP. 6" UNDERDRAIN

252.5'

8' (TYP)

7.5'

PERMEABLE PAVERS 20' X 180'

ROLL CURB DOWN TO CREATE A STORMWATER OPENING

12" THICK, 6" STONE WITH FILTER FABRIC

H.C. SIGN (TYP)

CAPPED I.P. "LAMBRELL" FD. & USED

1/2" REBAR BENT NORTH FD.

Jodi R. Turner Doc. No. 56463040

Darice A. Angwin & R. Neil Roderick

Gregory A. Snow Rec. No. 54594279

Jennifer A. Wilmot Rec. No. 55480007

Jane M. Krejci Rec. No. 55266213

City of Cuyahoga Falls Doc. No. 56502719

County of Summit Rec. No. 56610563

EX. C.B. TOP 1012.29 INV. 1009.99–12" VCP N.E. INV. 1009.89–12" VCP S.

EX. C.B. TOP 1012.32 INV. 1010.07–12" S.W.

SANITARY MANHOLE TOP. 1011.94 INV. 1003.44–18" VCP N. INV. 1002.99–8" VCP W. INV. 1002.94–18" VCP E. INV. 1002.74–8" VCP S.

SANITARY MANHOLE TOP. 1011.61 INV. 1008.44–20" N.E. INV. 1006.76–12" VCP E.

SANITARY MANHOLE TOP. 1011.76

EX. C.B. TOP 1011.61 INV. 1006.76–12" VCP E.

1 2 3 4 5 6

SCALE: 1" = 20'

BASIS OF BEARINGS:
OHIO STATE PLANE COORDINATE SYSTEM, NAD 83, OHIO NORTH ZONE (ODOT CORS)

B.M. ~ TOP OF CAPPED IRON PIN 40' FEET SOUTH OF S.W. PROPERTY CORNER.
ELEV.~ 1027.89

LEGEND

- IRON PINS TO BE SET AT ALL LOT CORNERS (WITH IDENTIFICATION CAPS 7604)
- IRON PIN FOUND AS NOTED
- MONUMENT BOX WITH IRON PIN FOUND AS NOTED
- VALVE
- LIGHT POLE
- SIGN
- UTILITY POLE
- GUY WIRE
- HYDRANT
- STOP SIGN
- CONCRETE

NOTES:

1. NEW PARKING SPACES = 147.
2. DIMENSIONS FOR CURB ARE TO FACE OF CURB.
3. ROLL ENDS OF CURB DOWN TO 0" HEIGHT OVER 2' OF LENGTH.
4. STORM SEWER PIPE MATERIAL TO BE POLYPROPYLENE (HP STORM) PER ODOT 707.65

STORM STRUCTURE DATA

No.	STRUCTURE	TOP	INV.	PIPE INFORMATION
1	CB	1014.19	1011.19–12" E.	94.66 L.F. 12" HD STORM @ 1.34%
2	CB	1012.50	1010.50–12" N.E.	83.13 L.F. 12" HD STORM @ 0.70%
3	EX CB	ADJUST TO 1013.07	1010.76–6" N. 1009.92–12" S.W., E. & W.	28.66 L.F. 12" EX. STR. @ 3.73%
4	EX CB	1012.40	1010.84–8" N. 1008.85–12" W. & S.	
5	CB	1014.49	1011.49–12" S.E.	112.87 L.F. 12" HD STORM @ 1.49%
6	EX CB	1012.06	1009.81–12" W. PROP. 1009.11–15" E. EX. 1009.06–12" N. EX.	

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GEOMETRIC AND UTILITY PLAN

CITY OF CUYAHOGA FALLS

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C-103

SECOND STREET 66'

FRONT STREET 66'

WADSWORTH AVENUE 66'

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SANITARY MANHOLE TOP 1027.96

SANITARY MANHOLE TOP 1027.31

EX. APPROACH

LANDSCAPE AREA

CAPPED I.P. "LEWIS LAND" FD. (0.08' W.)

B.M.

SAWCUT AND DROP CURB AT NEW DRIVE APPROACH

EX. CURB

EX. 8" SAN.

EX. 3" W.M.

EX. 4" G.M.

1/2" REBAR FD.

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DRIVE (BY OTHERS)

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EX. C.B. TOP 1022.42 INV. 1020.27–8" PVC S. INV. 1019.57–10" PVC N.

EX. 8" STR.

F.F. 1023.21

METER

EX. C.B. TOP 1021.94

TRANSFORMER

HYDRANT

EX. WALL

FUTURE SIDEWALK

PINE TREE ROW

6' SIDEWALK

6' SIDEWALK (6" THICK)

ODOT TYPE 6 CURB (TYP.)

ONE WAY

TRUCK DOCK

U.G. CABLE, PHONE & ELECTRIC

EX. ASPHALT

EX. CURB

DOWNSPOUT

PATIO W/ RAILING

EX. 1" WALL

DRIVE (BY OTHERS)

PROP. 12" STR.

PERMEABLE PAVERS 20' X 180'

ROLL CURB DOWN TO CREATE A STORMWATER OPENING

12" THICK, 6" STONE WITH FILTER FABRIC

CAPPED I.P. "CAMPBELL" FD. & USED

H.C. SIGN (TYP.)

EX. C.B. TOP 1012.29 INV. 1009.99–12" VCP N.E. INV. 1009.89–12" VCP S.

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EX. C.B. TOP 1011.61 INV. 1006.76–12" VCP E.

SANITARY MANHOLE TOP. 1011.76

EX. 18" SAN.

EX. 8" W.M.

EX. 12" STR.

EX. 15" STR.

EX. 20" STR.

EX. 10" STR.

EX. 6" G.M.

SCALE: 1" = 20'

BASIS OF BEARINGS:
OHIO STATE PLANE COORDINATE SYSTEM, NAD 83, OHIO NORTH ZONE (ODOT CORS)

B.M. ~ TOP OF CAPPED IRON PIN 40' FEET SOUTH OF S.W. PROPERTY CORNER.
ELEV.~ 1027.89

LEGEND

- IRON PINS TO BE SET AT ALL LOT CORNERS (WITH IDENTIFICATION CAPS 7604)
- IRON PIN FOUND AS NOTED
- MONUMENT BOX WITH IRON PIN FOUND AS NOTED
- VALVE
- LIGHT POLE
- SIGN
- UTILITY POLE
- GUY WIRE
- HYDRANT
- STOP SIGN
- CONCRETE
- T/C TOP OF CURB
- SF SILT FENCE
- CE CONSTRUCTION ENTRANCE
- WO CONCRETE WASHOUT

NOTES:
1.

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FRONT STREET SUMMIT DD PARKING LOT EXPANSION

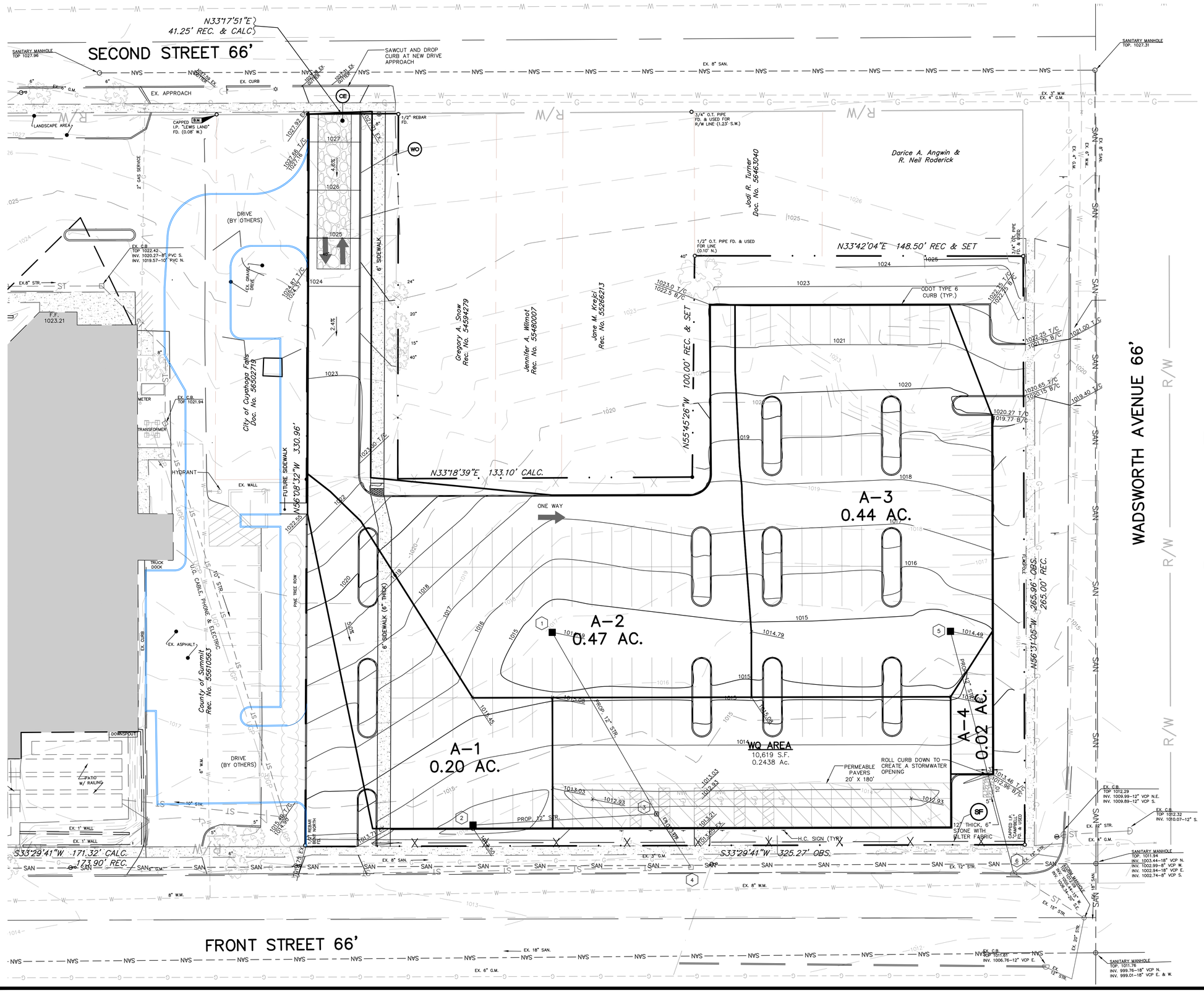
GRADING PLAN AND SWPPP

CITY OF CUYAHOGA FALLS

DWG FILE: F:\FRONT STREET\STO\DWG\BASE\FRONT DESIGN
DRAWN BY: TG
DATE: 2/10/2021
DESIGNED BY: DWS
REVISIONS: DATE:
REVISIONS: DATE:

C-104

SHEET 5 OF 17



BASIS OF BEARINGS:
OHIO STATE PLANE COORDINATE SYSTEM, NAD 83, OHIO NORTH ZONE (ODOT CORS)

B.M. ~ TOP OF CAPPED IRON PIN 40' FEET SOUTH OF S.W. PROPERTY CORNER.
ELEV.~ 1027.89

LEGEND

- IRON PINS TO BE SET AT ALL LOT CORNERS (WITH IDENTIFICATION CAPS 7604)
- IRON PIN FOUND AS NOTED
- MONUMENT BOX WITH IRON PIN FOUND AS NOTED
- VALVE
- LIGHT POLE
- SIGN
- UTILITY POLE
- GUY WIRE
- HYDRANT
- STOP SIGN
- CONCRETE
- SF SILT FENCE
- CE CONSTRUCTION ENTRANCE
- WO CONCRETE WASHOUT

NOTES:

1. TOTAL IMPERVIOUS AREA = 1.44 Ac.

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FRONT STREET SUMMIT DD PARKING LOT EXPANSION

DRAINAGE MAP

CITY OF CUYHOGA FALLS

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SHEET 6 OF 17

CRITICAL AREA PLANTING – TEMPORARY SEEDING (TS)

STANDARD

Definition

The establishment of a temporary vegetative cover on disturbed areas by seeding with the appropriate rapid growing plants.

Purposes

1. To reduce the erosion and sedimentation by stabilizing disturbed areas that will not be brought to final grade for a year or less.
2. To reduce problems associated with mud or dust from bare soil surfaces during construction.
3. To reduce sediment runoff to downstream areas and improve the visual resources of the construction area.

Conditions Where Practice Applies

On exposed soil surfaces where additional work (grading, etc.) is not scheduled for a period of three weeks to less than one year.

Planning Considerations

1. Protect the area from excess runoff as necessary with diversions, terraces, or sediment basins.
2. Evaluate the capabilities and limitations of the soil to be seeded. Special attention needs to be given to soil pH, texture, internal water movement, steepness, and stability in order to plan the appropriate treatment.
3. Plant species should be selected on the basis of quick germination, growth, and time of year to be seeded.
4. Fertilizer, lime, seedbed preparation, seed coverage, mulch, and irrigation should be used as necessary to promote quick plant growth.

SPECIFICATIONS

I. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and anchoring.

B. Install the needed erosion control practices prior to seeding such as diversions, temporary waterways for diversions outlets, and sediment basins.

II. Seedbed Preparation

A. Lime (in lieu of a soil test recommendation) on acid soil (pH 5.5 or lower) and subsoil at a rate of 100 pounds per 1000 square feet or two tons per acre of agricultural ground limestone. For best results make a soil test.

B. Fertilizer (in lieu of a soil test recommendation) shall be applied at a rate of 12–15 pounds per 1000 square feet or 500–600 pounds per acre of 10–10–10 or 12–12–12 analysis or equivalent.

C. Work the lime and fertilizer into the soil with a disk harrow, springtooth harrow, or similar tools to a depth of two inches. On sloping areas the final operation shall be on the contour.

III. Seeding

A. Species Selection 1/

March 1 to August 15th	Per 1000 Square Feet	Per Acre
1. Oats or	3 lbs.	4 bu.
2. Perennial Ryegrass	1 lb.	40 lbs.
3. Tall Fescue	1 lb.	40 lbs.

August 16 to November 1 2/	Per 1000 Square Feet	Per Acre
1. Rye or	3 lbs.	2 bu.
2. Wheat or	3 lbs.	2 bu.
3. Perennial Ryegrass	1 lb.	40 lbs.
4. Tall Fescue	1 lb.	40 lbs.

1/ Other seed species may be substituted; check with the local SCS office for recommendations.

2/ After November 1, use mulch only. See Standard and Specifications for Mulching.

B. Apply the seed uniformly with a cyclone seeder, drill, cultipacker seeder (slurry may include seed and fertilizer) preferably on a firm, moist seedbed. Seed wheat or rye no deeper than one inch. Seed ryegrass no deeper than one–fourth inch.

C. When feasible, except where 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 wherever possible.

IV. Mulching

A. Mulch shall be applied to protect the soil and provide a better environment for plant growth.

B. Mulch shall consist of small grain straw (preferably wheat or rye) and shall be applied at the rate of two tons per acre or 100 pounds (two to three bales) per 1000 square feet.

C. Spread the mulch uniformly by hand or mechanically so the soil surface is covered.

D. Mulch Anchoring Methods

1. Mechanical – Use a disk, crimper, or similar type tool set straight to punch or anchor the mulch material into the soil.
2. Asphalt Emulsion – Apply at the rate of 160 gallons per acre into the mulch as it is being applied.
3. Mulch Nettings – Use according to the manufacturer's recommendations. Use in areas of water concentration to hold mulch in place.

V. Irrigation

If soil moisture is deficient, supply new seedings with adequate water for plant growth until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

CRITICAL AREA PLANTING – PERMANENT SEEDING (PS) – DORMANT SEEDING (DS)

STANDARD

Definition

The establishment of perennial vegetation on disturbed areas by planting seed.

Purposes

1. To reduce the erosion and decrease sediment yield from disturbed areas.
2. To permanently stabilize disturbed areas in a manner that is economical, adaptable to site conditions, and allows selection of the most appropriate plant materials.

Conditions Where Practice Applies

1. Disturbed areas where permanent, long–lived vegetative cover is needed to stabilize the soil.
2. Rough graded areas which will not be brought to final grade for several months or more.

Planning Considerations

1. Protect the area from excess runoff as necessary with diversions, grassed waterways, terraces, or sediment basins.
2. Evaluate the capabilities and limitations of the soil to be seeded. Special attention needs to be given to soil pH, texture, internal water movement, steepness, and stability in order to plan the appropriate treatment.
3. Plant species should be selected on the basis of soil type, planned use of the area, and the amount or degree of maintenance that can be devoted to the area in the future.
4. Fertilizer, lime, seedbed preparation, seed coverage, mulch, and irrigation should be used as necessary to promote quick plant growth.
5. Vegetation cannot be expected to provide erosion control cover and prevent soil slippage on a soil that is not stable due to its structure, water movement, or excessive slope.

SPECIFICATIONS

I. Site Preparation

A. Soil material should consist of at least 25 percent silt and clay to provide an adequate amount of moisture holding capacity. An excessive amount of porous sand will not consistently provide sufficient moisture for good growth regardless of other soil factors.

B. Where compacted soils occur, they should be broken up sufficiently to create a favorable rooting depth of 6–8 inches.

C. Stockpile topsoil to apply to sites that are otherwise unsuited for establishing vegetation.

D. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance. After the grading operation, spread topsoil where needed.

E. Install the needed erosion control practices such as diversions, grassed waterways, and sediment basins.

II. Seedbed Preparation

A. Lime (in lieu of a soil test recommendation) on acid soil and subsoil, 100 pounds per 1000 square feet or two tons per acre of agricultural ground limestone. For best results make a soil test.

B. Fertilizer (in lieu of a soil test recommendation) apply 25 pounds per 1000 square feet or 1000 pounds per acre of 10–10–10 or 12–12–12 analysis. For best results make a soil test.

C. Work the lime and fertilizer into the soil with a disk harrow, springtooth harrow, or other suitable field equipment to a depth of three inches. On sloping land the final operation shall be on the contour.

III. Seeding

A. Select a species or mixture appropriate for the site.

1. Permanent Seeding

Kind of Seed 1/	Seeding Dates 2/	Per 1000 Sq. Ft.	Per Acre
a)Creeping Red Fescue, PLUS Domestic Ryegrass PLUS Kentucky Bluegrass	March–May, Aug.–Sept.	1/2 lb.3/	20 lbs.3/
		1/4 lb.	10 lbs.
		1/4 lb.	10 lbs.
b)Tall Fescue	March–May Aug.–Sept.	1 lb.3/	40 lbs.
c)Dwarf (Turf–type) Fescue 4/		1 lb.3/	40 lbs.3/

2. Special Seedings – Steep Banks or Cuts

Kind of Seed 1/	Seeding Dates 2/	Per 1000 Sq. Ft.	Per Acre
a)Tall Fescue	March–May Aug.–Sept.	1 lb.	40 lbs.
b)Crownvetch PLUS Tall Fescue	March–May Aug.– ?	1/4 lb.	10 lbs.
		1/2 lb.	20 lbs.
c)Flatpea PLUS Tall Fescue	March–May August	1/2 lb.	20 lbs.
		1/2 lb.	20 lbs.

3. Waterways and Road Ditches

a)Tall Fescue	March–May Aug.–Sept.	1 lb.	40 lbs.

1/ Other seed species may be substituted for these mixtures. Check with local SCS office for recommendations.

2/ These seeding dates are ideal. With the use of mulch and irrigation, seedings could be made any time throughout the growing season.

3/ The seeding rates need to be increased two to three times if the mixture is to be used as a lawn.

4/ The dwarf or turf–type fescues are much shorter and have finer leaves than the tall fescues. It is much better suited for lawn–type areas than tall fescues.

B. Dormant Seedings.

Seedings should not be planted from October 1 through November 20th. During this period the seeds are likely to germinate, but probably will not be able to survive the winter.

The following methods may be used to make a "Dormant Seeding":

1. 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 percent for this type of seeding.
2. From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilize, apply the selected seed mixture, and mulch and anchor. Increase the seeding rates by 50 percent for this type of seeding.

C. Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro–seeder (slurry may include seed and fertilizer) on a firm, moist seedbed. Cover to a depth of 1/4 to 1/2–inch.

D. 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.

IV. Mulching

A. Mulch shall be applied to protect the soil and provide a better environment for plant growth.

B. Mulch shall consist of small grain straw (preferably wheat or rye) and shall be applied at the rate of two tons per acre or 100 pounds (two or three bales) per 1000 square feet.

C. Spread the mulch uniformly by hand or mechanically so the soil surface is covered.

D. Mulch Anchoring Methods

1. Mechanical – Use a disk, crimper, or similar type tool set straight to punch or anchor the mulch material into the soil.
2. Asphalt Emulsion – Apply at a rate of 160 gallons per acre into the mulch as it is being applied.
3. Mulch Nettings – Use according to the manufacturer's recommendations. Use in areas of water concentration to hold mulch in place.

V. Maintenance

Maintenance is a vital factor in maintaining an adequate vegetative erosion control cover. See Table 1.

A. Irrigation – If soil moisture is deficient, supply new seedings with adequate water for plant growth until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry and hot seasons, or on adverse sites.

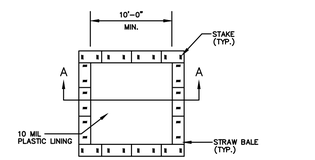
B. Repairs – Inspect all seeded areas for failures and make necessary repairs, replacements, reseedings, and remulching within the planting season, if possible.

1. If stand is inadequate, overseed, fertilize, using half of rates originally applied, and mulch.
2. If stand is over 60 percent damaged, reestablish following original lime, fertilizer, seedbed preparation, seeding recommendations, and mulching recommendations.

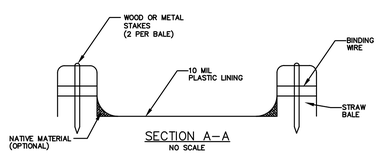
TABLE 1

Maintenance Fertilization and Mowing for Permanent Seeding

Mixture	Formula	Fertilizer Rate Lbs./Ac.	Fertilizer Rate Lbs./1000 Sq. Ft.	Time	Mowing
Creeping Red Fescue Ryegrass Kentucky Bluegrass	10–10–10	500	12	Fall. Yearly or as needed.	Not closer than 3".
Tall Fescue	10–10–10	500	12	Fall. Yearly or as needed.	Not closer than 4".
Dwarf (Turf–Type) Fescue	10–10–10	500	12	Fall. Yearly or as needed.	Not closer than 2".
Flatpea and Crownvetch with Fescue	0–20–20	400	10	Spring. Yearly following establishment and every 4–7 years thereafter.	Do not mow.



PLAN
NO SCALE



SECTION A–A
NO SCALE

NOTE
1. ACTUAL LAYOUT DETERMINED IN FIELD

CONCRETE WASHOUT
NO SCALE

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FRONT STREET SUMMIT DD PARKING LOT EXPANSION

SWPPP NOTES

CITY OF CUYAHOGA FALLS

DWG FILE: P:\Front Street\Sd Dwgs\General Sheets.dwg (SWPPP-1)
DRAWN BY: TG
DATE: 2/10/2021
DESIGNED BY: DWS
REVISION: DATE:
REVISION: DATE:

C-106

SILT FENCE (SF)

Definition

A temporary sediment barrier consisting of a filter fabric stretched across and attached to supporting posts and entrenched. There are two types. The Silt Fence is a temporary linear filter barrier constructed of synthetic filter fabric, posts, and, depending upon the strength of the fabric used, wire fence for support. The Filter Barrier is constructed of stakes and burlap or synthetic filter fabric.

Purposes

1. To intercept and detain small amounts of sediment from disturbed areas during construction operations in order to prevent sediment from leaving the site.

2. To decrease the velocity of sheet flows and low-to-moderate level channel flows.

Conditions Where Practice Applies

1. Below disturbed areas where erosion would occur in the form of sheet and rill erosion.

2. Where the size of the drainage area is no more than 1/4 acre per 100 feet of silt fence length; the maximum slope length behind the barrier is 100 feet; and the maximum gradient behind the barrier is 50 percent (2:1).

3. In minor swales or ditch lines where the maximum contributing drainage area is no greater than 2 acres.

4. Under no circumstances should silt fences be constructed in live streams or in swales or ditch lines where flows are likely to exceed 1 cubic foot per second (cfs). See design Criteria for further clarification.

Planning Considerations

Laboratory work at the Virginia Highway and Transportation Research Council (VH & TRC) has shown that silt fences can trap a much higher percentage of suspended sediments than can straw bales. Silt fences may be preferable to straw barriers in many cases. While the failure rate of silt fences is lower than that of straw barriers, there have been instances in which silt fences were improperly installed. The installation methods outlined here can improve performance.

Filter barriers are inexpensive structures composed of burlap or standard weight synthetic filter fabric stapled to wooden stakes. Flow rates through burlap filter barriers are slightly slower and filtering efficiency is significantly higher than for straw bale barriers (see Table 1).

Table 1

FLOW RATES AND FILTERING EFFICIENCIES OF VARIOUS SEDIMENT FILTER MATERIALS

Material	Flow Rate(gal./sq.ft./min.)	Filter Efficiency (%)
Straw	5.6	67
Burlap (10 oz. fabric)	2.4	84
Synthetic Fabric	0.3 (Avg.)	97 (Avg.)

Source: Va. Highway and Transportation Research Council

Silt fences composed of a wire support fence and an attached synthetic filter fabric slow the flow rate significantly but have a higher filtering efficiency than burlap. Both woven and non-woven synthetic fabrics are commercially available. The woven fabrics generally display higher strength than the non-woven fabrics. When tested under acid and alkaline water conditions, most of the woven fabrics increase in strength. There is a variety of reactions among the non-woven fabrics. The same is true of testing under extensive ultraviolet radiation. Permeability rates vary regardless of fabric type. While all of the fabrics demonstrate very high filtering efficiencies for sandy sediments, there is considerable variation among both woven and non-woven fabrics when filtering the finer silt and clay particles.

Design Criteria

1. No formal design is required.

2. Filter barriers shall have an expected usable life of 3 months. They are applicable in ditch lines, around drop inlets, and at temporary locations where continuous construction changes the earth contour and runoff characteristics and where low or moderate flows (not exceeding 1 cfs) are expected.

3. Silt fences, because they have a much lower permeability than burlap filter barriers, have their applicability limited to situations in which only sheet or overland flows are expected. They normally cannot filter the volume of water generated by channel flows, and many of the fabrics do not have sufficient structural strength to support the weight of water ponded behind the fence line. Their expected usable life is 6 months.

Construction Specifications

The following construction specifications have been adapted from the Virginia Erosion and Sediment Control Handbook.

Materials

1. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements:

PHYSICAL PROPERTY	REQUIREMENTS
Filtering Efficiency	75% (min.)
Tensile Strength at 20% (max.) Elongation*	Extra Strength-50 lbs./lin.in. (min.) Standard Strength-30 lbs./lin.in. (min.)
Flow Rate	0.3 gal./sq.ft./min. (min.)

*Requirements reduced by 50 percent after 6 months of installation.

Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0° F to 120° F.

2. Burlap shall be 10 ounces per square yard of fabric.

3. Posts for Silt Fences shall be either 4-inch diameter wood or 1.33 pounds per linear foot steel with a minimum length of 5 feet. Steel posts shall have projections for fastening wire to them.

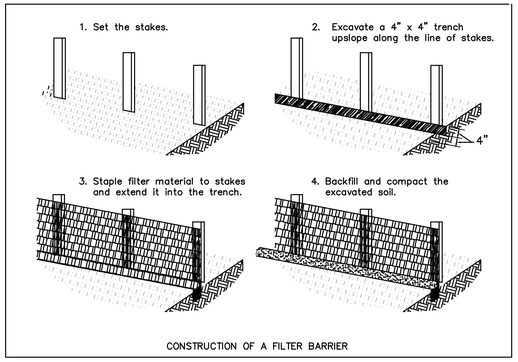
4. Stakes for Filter Barriers shall be 1" x 2" wood (preferred) or equivalent metal with a minimum length of 3 feet.

5. Wire fence reinforcement for silt fences using standard strength filter cloth shall be a minimum of 42 inches in height, a minimum of 14 gauge and shall have a maximum mesh spacing of 6 inches.

Filter Barrier: This sediment barrier may be constructed using burlap or standard strength synthetic filter fabric. It is designed for low or moderate flows not exceeding 1 cfs. See Figure 1.

1. The height of a filter barrier shall be a minimum of 15 inches and shall not exceed 18 inches.

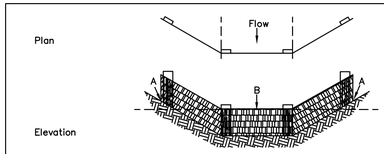
2. Burlap or standard strength synthetic filter fabric shall be purchased in a continuous roll and cut to the length of the barrier to avoid the use of joints (and thus improve the strength and efficiency of the barrier).



CONSTRUCTION OF A FILTER BARRIER

Source: Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

Figure 1



Points A should be higher than Point B

PROPER PLACEMENT OF A FILTER BARRIER IN A DRAINAGE WAY

Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

Figure 2

3. The stakes shall be spaced a maximum of 3 feet apart at the barrier location and driven securely into the ground (minimum of 8 inches).

4. A trench shall be excavated approximately 4 inches wide and 4 inches deep along the line of stakes and upslope from the barrier.

5. The filter material shall be stapled to the wooden stakes, and 8 inches of the fabric shall be extended into the trench. Heavy duty wire staples at least 1/2-inch long shall be used. Filter material shall not be stapled to existing trees.

6. The trench shall be backfilled and the soil compacted over the filter material.

7. If a filter barrier is to be constructed across a ditch line or swale, the barrier shall be of sufficient length to eliminate end flow, and the plan configuration shall resemble an arc or horseshoe with the ends oriented upslope (Figure 2).

8. Filter barriers shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

Silt Fence: This sediment barrier utilizes standard strength or extra strength synthetic filter fabrics. It is designed for situations in which only sheet or overland flows are expected. See Figure 3.

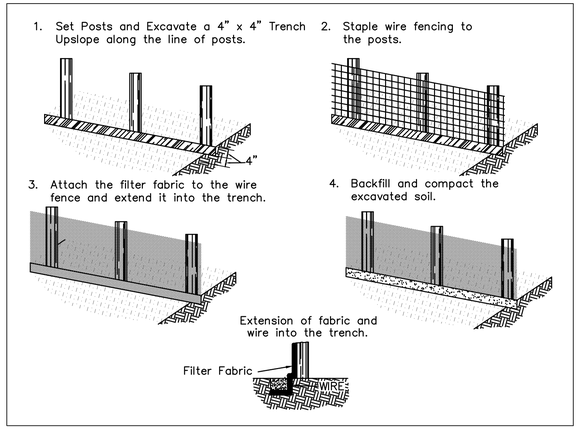
1. The height of a silt fence shall not exceed 36 inches (higher fences may impound volumes of water sufficient to cause failure of the structure).

2. The filter fabric shall be purchased in a continuous roll, cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and securely sealed.

3. Posts shall be spaced a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 12 inches). When extra strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet.

4. A trench shall be excavated approximately 4 inches wide and 4 inches deep along the line of posts and upslope from the barrier.

5. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least 1 inch long, tie wires or hog rings. The wire shall extend into the trench a minimum of 2 inches and shall not extend more than 36 inches above the original ground surface.



Source: Adapted from Installation of straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

Figure 3

6. The Standard Strength Filter fabric shall be stapled or wired to the fence, and 8 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

7. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of Item No. 6 applying.

8. The trench shall be backfilled and soil compacted over the filter fabric.

9. Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

Maintenance

1. Silt fences and filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.

2. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly.

3. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.

4. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required, shall be dressed to conform with the existing grade, prepared and seeded.

STORM DRAIN INLET PROTECTION (IP)

Definition

A sediment filter installed around a storm drain drop inlet or curb inlet to reduce sediment discharge.

Purpose

To prevent sediment from entering storm drainage systems prior to permanent stabilization of the disturbed area.

Conditions Where Practice Applies

Where storm drain inlets are to be made operational before permanent stabilization of the disturbed drainage area. Different types of structures are applicable to different conditions.

Planning Considerations

Storm sewers which are made operational before their drainage area is stabilized can convey large amounts of sediment to natural drainageways. In case of extreme sediment loading, the storm sewer itself may clog and lose a major portion of its capacity. To avoid these problems, it is necessary to prevent sediment from entering the system at the inlets.

This practice contains several types of inlet filters and traps which have different applications dependent upon site conditions and type of inlet. Other innovative techniques for accomplishing the same purpose are encouraged, but only after careful study of their effectiveness should they be installed.

Note that these various inlet protection devices are for drainage areas of less than one acre. Runoff from large disturbed areas should br routed through a SEDIMENT BASIN.

The best way to prevent sediment from entering the storm sewer system is to stabilize the site as quickly as possible, preventing erosion and stopping sediment at its source.

Design Criteria

1. The drainage area shall be no greater than 1 acre.

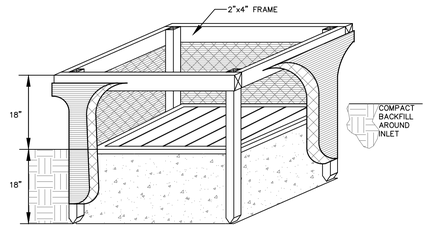
2. The inlet protection device shall be constructed in a manner that will facilitate cleanout and disposal of trapped sediment and minimize interference with construction activities.

3. The inlet protection devices shall be constructed in such a mannner that any resultant ponding of stormwater will not cause excessive inconvenience or damage to adjacent areas or structures.

4. Design criteria more specific to each particular inlet protection device will be found with that construction specifications.

Construction Specifications

1. INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS



1. Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drains become operational.

2. The earth around the inlet shall be excavated completely to a depth of at least 18 inches.

3. The wooden frame shall be constructed of 2x4 inch construction-grade lumber. The 2x4 inch posts shall be driven 1 foot into the ground at four corners of the inlet and the top portion of the 2x4 lumber frame assembled using the overlap joint shown. The top of the frame shall be at least six (6) inches below adjacent roads if ponded water may 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 stretched tightly around the frame and fastened securely to it.

5. Geotextile fabric shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall extend from the top of the frame to 18 inches below the inlet so the ends of the cloth are not fastened to the same post.

6. Backfill shall be placed around the inlet in compacted 6-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 the depression and if runoff bypassing the inlet will not flow to a settling pond. The top of earth dikes shall be at least six (6) inches higher than the top of the frame.

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FRONT STREET SUMMIT DD PARKING LOT EXPANSION

SWPPP NOTES

CITY OF CUYAHOGA FALLS

DWG FILE: P:\Front Street\3d Drop\General Sheets.dwg (SWPPP-2)
DRAWN BY: TG
DATE: 2/10/2021
DESIGNED BY: DWS
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:

C-107

Construction Specifications

2. GRAVEL CURB INLET PROTECTION

a. Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.

b. The wooden frame is to be constructed of 2–by–4–in. construction–grade lumber. The end spacers shall be a minimum of 1 ft. beyond both ends of the throat opening. The anchors shall be nailed to 2–by–4–in. stakes driven on the opposite side of the curb.

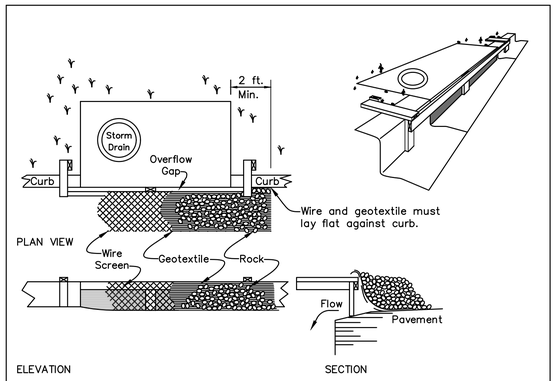
c. The wire mesh shall be of sufficient strength to support fabric and stone. It shall be a continuous piece with a minimum width of 30 in. and 4 ft. longer than the throat length of the inlet, 2 ft. on each side.

d. Geotextile cloth shall have an equivalent opening size (EOS) of 20–40 sieve and be resistant to sunlight. It shall be at least the same size as the wire mesh.

e. The wire mesh and geotextile cloth shall be formed to the concrete gutter and against the face of the curb on both sides of the inlet and securely fastened to the 2–by–4–in. frame.

f. Two–inch stone shall be placed over the wire mesh and geotextile in such a manner as to prevent water from entering the inlet under or around the geotextile cloth.

g. If the stone filter becomes clogged with sediment the stone must be pulled away from the geotextile cloth, cleaned and replaced.



GRAVEL CURB INLET PROTECTION

MATTING

Definition

Matting such as excelsior or jute is used to stabilize easily eroded areas such as channels and steep slopes while vegetation is becoming established.

Conditions Where Practice Applies

Matting should be used on:

1) Channels where the designed flow exceeds 3.5 fps.
2) Steep slopes.
3) Problem areas that have highly erosive soils.
4) Areas that may be slow to establish adequate vegetative cover.

Design Criteria

Materials

1. Matting is available in many acceptable materials that provide excellent soil protection. Two acceptable materials are jute and excelsior matting. Excelsior matting is a wood fiber mulch covered with plastic netting on one or both sides. Jute matting is a woven cloth of jute yarn and may be used in conjunction with organic mulch. Both are widely available, easily installed, and adaptable to most site conditions.

Grade of Matting

1. The specific grade of a matting should be specified. Matting is available in many different grades for a wide range of uses and site conditions.

Channel Width

1. Channels often require several widths of mattings. The width of coverage should be specified for individual sections of the channel.

Manufacturers Instructions

1. Matting manufacturers usually provide detailed installation instructions for their products. The manufacturer's instructions should be referenced during design and included in the construction plans. If instructions are not available, the following guidelines listed in the specifications for matting may be used.

Erosion Stops

1. Erosion stops are made of strips of matting placed in narrow trenches 6–12 in. deep across the full cross section of the channel. The strips are installed under the channel lining matting. Erosion stops prevent undermining and gullies from forming beneath the matting. They should be specified when recommended by the matting manufacturer and for areas of high–erosion potential such as where rocky conditions may prevent good soil matting contact, erosive soils or steep slopes. Depending on erosion potential, specifications should require erosion stops spaced from 20–100 ft. apart.

Construction Specifications

a. Material––Excelsior matting shall be 48 in. wide and weigh an average of 0.75 lb./sq. yd. or greater. Jute matting shall be 48 in. wide and weigh an average of 1.2 lb./yd. or greater. Matting made of other material and providing equal or greater stabilization than the above may be substituted.

b. Site Preparation–– After the site has been shaped and graded, a seedbed shall be prepared that is relatively free of foreign material, clods or rocks that are greater than 1.5 in. in diameter. The site shall be prepared to ensure that the matting has good soil contact and the matting will not "bridge" or "tent" over obstructions.

c. Matting shall be held in place as recommended by the manufacturer as adequate for the site conditions or with sod staples. Sod staples are U–shaped wire staples used for fastening sod, jute or excelsior matting and other erosion–control materials to the soil surface. Sod staples shall be No. 11 gauge or heavier and be 6–10 in. in length. In loose or sandy soils longer staples shall be used.

d. Planting––Lime and fertilizer shall be used according to the recommendation of a soil test or the seeding plan. Seed according to the matting manufac–turer's recommendations; or, for excelsior matting, seed area to be protected before installation; or, when using jute matting, apply half the seed before and half the seed after installation.

e. Matting shall be installed as specified by the manufacturer as appropriate for the site conditions or the following procedure may be used:

1) After the site is prepared and erosion stops are installed, start laying the mat from the top of the slope or channel and unroll the matting allowing 4–in. overlaps at the edges.

2) Secure the matting by burying the top ends in a trench 6 in. deep and staple the folded ends to the bottom of the trench. Backfill and tamp firmly to the established grade.

3) Staple matting every 12 in. across the width beginning at the edges and every 2 ft. in rows the entire length of the matting. Every other row of staples running the length of the matting should be staggered.

4) To join two rolls together, cut a trench to anchor the end of the new roll and secure it the same as the top roll. Overlap the end of the previous roll 18 in. over the new roll. Continue to staple as described above.

5) When using excelsior matting, the plastic netting shall be on top of the wood fiber.

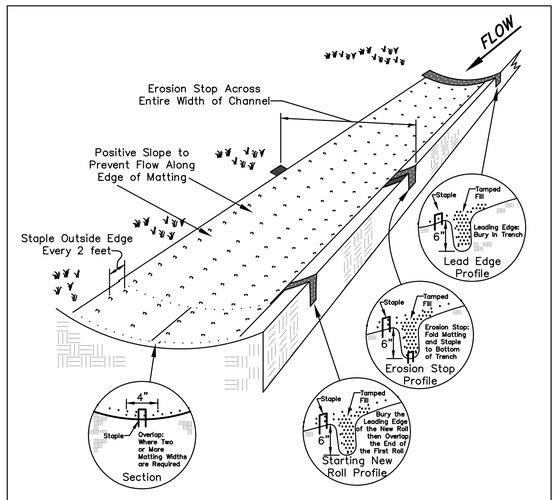
f. Erosion stops shall be used where recommended by the matting manufacturer and on areas specified where high–erosion potential may cause undermining and gullies to form beneath the matting.

1) Erosion stops shall be made of strips of matting placed in narrow trenches 6–12 in. deep that cover the full cross section of the channel. They shall be spaced according to the manufacturer's recommendations or by the following:––3 ft. down the channel from each point of entry of concentrated flow,––at points where change in gradient or direction of channel occurs, and––on long slopes at spacing from 20–100 ft. depending upon erodibility of the soil, velocity and volume of flow.

2) Erosion stops shall extend beyond the channel liner to the full design width of the channel, this will check any rills that might form outside or along the edge of the channel lining.

3) Erosion stops shall be constructed with 6 in. deep trench, stapled to the bottom of the trench, backfilled and tamped firmly to conform with the cross section of the channel.

4) If seeding has been done prior to installation of erosion stops, reseed disturbed areas prior to placement of channel liner.



SPECIFICATIONS FOR MATTING – USE ON ALL SWALES

INSPECTION CHECKLIST

Site-Specific BMPs

BMP/Activity Description	Implemented	Maintained	Corrective Action Needed	Date for Corrective Action
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		

Comments

Overall Site Issues

BMP/Activity Description	Implemented	Maintained	Corrective Action Needed	Date for Corrective Action
Are all slopes and disturbed areas not actively being worked properly stabilized?	☐ Yes ☐ No	☐ Yes ☐ No		
Are natural resource areas (streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	☐ Yes ☐ No	☐ Yes ☐ No		
Are perimeter controls and sediment barriers adequately installed and maintained?	☐ Yes ☐ No	☐ Yes ☐ No		
Are discharge points and receiving waters free of sediment deposits?	☐ Yes ☐ No	☐ Yes ☐ No		
Are storm drain inlets properly protected?	☐ Yes ☐ No	☐ Yes ☐ No		
Is sediment being tracked into the street?	☐ Yes ☐ No	☐ Yes ☐ No		
Is trash/litter from work areas collected and placed in a covered dumpster?	☐ Yes ☐ No	☐ Yes ☐ No		
Are washout facilities available and maintained?	☐ Yes ☐ No	☐ Yes ☐ No		
Are vehicle and equipment fueling, and maintenance areas free of spills, or any other deleterious material?	☐ Yes ☐ No	☐ Yes ☐ No		
Are materials that are potential stormwater contaminants stored inside or under cover?	☐ Yes ☐ No	☐ Yes ☐ No		
Are non-stormwater discharges (wash water, dewatering water, etc.) properly controlled?	☐ Yes ☐ No	☐ Yes ☐ No		

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PART III G.1

DESCRIPTION
REDEVELOPMENT OF A COMMERCIAL PROPERTY.

SITE DATA
PRE–CONSTRUCTION USE: COMMERCIAL AND RESIDENTIAL
PRE–CONSTRUCTION RUNOFF COEFFICIENT: 0.87
POST–CONSTRUCTION USE: COMMERCIAL
POST–CONSTRUCTION RUNOFF COEFFICIENT: 0.87
TOTAL SITE AREA: 1.74 AC.
TOTAL SITE AREA DISTURBED: 1.7 AC.
TOTAL PROPOSED IMPERVIOUS AREA AS A RESULT OF CONSTRUCTION ACTIVITY IS 1.44 AC., 83% OF SITE.

SOIL INFORMATION
PER THE SUMMIT COUNTY GIS WEBSITE, THE SITE CONSISTS OF:
EuC – ELLSWORTH URBAN LAND COMPLEX, HYDRAULIC GROUP D
OFFSITE BORROW OR SPOIL AREAS WILL NOT BE REQUIRED.

SEQUENCE OF MAJOR CONSTRUCTION OPERATIONS
1. INITIAL PROJECT STAGE
   - A. PRE–CONSTRUCTION MEETING INCLUDING SITE VISIT
   - B. INSTALLATION OF CONSTRUCTION ENTRANCE
   - C. INSTALLATION OF SILT FENCING WITHIN 7 DAYS OF CONSTRUCTION ENTRANCE INSTALLATION.
   - D. INSTALLATION OF SEDIMENT CONTROLS AND DIVERSIONS WITHIN 7 DAYS OF GRUBBING.

2. INTERMEDIATE PROJECT STAGE
   - A. EARTHMOVING ACTIVITIES/SEEDING AND MULCHING
   - B. UTILITY AND INFRASTRUCTURE INSTALLATION WITH INLET PROTECTION
   - C. PAVING ACTIVITIES

3. FINAL PROJECT STAGE
   - A. FINAL GRADING AND PERMANENT SOIL STABILIZATION (WITHIN SEVEN (7) DAYS OF REACHING FINAL GRADE)(WITHIN TWO (2) DAYS IF WITHIN 50' OF STREAM)
   - B. INSTALL PERMEABLE PAVERS.
   - C. FINAL STABILIZATION MEETING
   - D. REMOVAL OF CONSTRUCTION ENTRANCE, WASHOUT AREA AND TEMPORARY SEDIMENT CONTROL STRUCTURES
   - E. REMOVAL OF SILT FENCING UPON SITE STABILIZATION
   - F. INSPECT STORM SEWER AND REMOVE ALL DEBRIS FROM THE SYSTEM CAUSED BY CONSTRUCTION

CONSTRUCTION IMPLEMENTATION TIMETABLE

	J	F	M	A	M	J	J	A	S	O	N	D
GRUBBING				•	•	•						
SEDIMENT CONTROL				•	•	•	•	•	•	•	•	•
EXCAVATION					•	•						
GRADING						•	•	•	•	•	•	•
UTILTY INSTALLATION						•	•	•	•			
INFRATRUCTURE INSTALLATION						•	•	•	•	•	•	•

RECEIVING STREAM
IMMEDIATE RECEIVING STREAM IS THE CUYAHOGA RIVER.

MAINTENANCE
ALL TEMPORARY AND PERMANENT CONTROL PRACTICES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED IN A FUNCTIONAL CONDITION UNTIL ALL UP SLOPE AREAS THEY CONTROL ARE PERMANENTLY STABILIZED. THE CONTRACTOR SHALL COMPLY WITH THE MAINTENANCE SCHEDULE INCLUDED IN THE APPROVED PLANS FOR THE PROPOSED EROSION CONTROLS. A WRITTEN DOCUMENT CONTAINING THE SIGNATURES OF ALL CONTRACTORS AND SUB–CONTRACTORS INVOLVED IN THE IMPLEMENTATION OF THE BMPS MUST BE MAINTAINED AS PROOF ACKNOWLEDGING THAT THEY REVIEWED AND UNDERSTAND THE CONDITIONS AND RESPONSIBILITIES OF THE SWPPP.

INSPECTION
ALL STORMWATER CONTROLS ON THE SITE ARE INSPECTED BY QUALIFIED INSPECTION PERSONNEL AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN ONE–HALF INCH OF RAIN PER 24 HOUR PERIOD. A WRITTEN RECORD DOCUMENTING THE INSPECTION AND THE RESULTS OF THESE INSPECTIONS MUST BE CREATED AND MAINTAINED ON–SITE WITH THE SWPPP. THESE INSPECTION REPORTS MUST CONTAIN THE NAME OF THE INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION, AND ANY CORRECTIVE MEASURES TAKEN. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE SWPPP SHALL BE OBSERVED TO ENSURE THAT THOSE ARE OPERATING CORRECTLY. DISCHARGE LOCATIONS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO THE RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF–SITE VEHICLE TRACKING.

I. WHEN PRACTICES REQUIRE REPAIR OR MAINTENANCE.
IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE IS IN NEED OF REPAIR OR MAINTENANCE, WITH EXCEPTION OF A SEDIMENT SETTLING POND, IT MUST BE REPAIRED OR MAINTAINED WITHIN THREE DAYS OF INSPECTION. SEDIMENT SETTLING PONDS MUST BE REPAIRED OR MAINTAINED WITHIN 10 DAYS OF THE INSPECTION.

II. WHEN PRACTICES FAIL TO PROVIDE THEIR INTENDED FUNCTION.
IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE FAILS TO PERFORM ITS INTENDED FUNCTION AND THAT ANOTHER, MORE APPROPRIATE CONTROL PRACTICE IS REQUIRED, THE SWPPP, MUST BE AMENDED AND THE NEW CONTROL PRACTICE MUST BE INSTALLED WITHIN 10 DAYS OF INSPECTION.

III. WHEN PRACTICES DEPICTED ON THE SWPPP ARE NOT INSTALLED.
IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE HAS NOT BEEN IMPLEMENTED IN ACCORDANCE WITH THE SWPPP. THE SWPPP MUST BE AMENDED AND THE NEW CONTROL PRACTICE MUST BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION. IF THE INSPECTION REVEALS THAT THE PLANNED CONTROL PRACTICE IS NOT NEEDED, THE RECORD MUST CONTAIN A STATEMENT OF EXPLANATION AS TO WHY THE CONTROL PRACTICE IS NOT NEEDED.

PERMITS
THE CONDITIONS OF THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT SHALL BE MET DURING ALL STAGES OF CONSTRUCTION.

APPROVALS
NPDES PERMIT NO.
SWPPP APPROVED BY SUMMIT SOIL & WATER CONSERVATION DISTRICT BY LETTER THIS DAY OF ____________________, 2021

PART III G.2

GENERAL EROSION AND SEDIMENT CONTROL NOTES
TEMPORARY EROSION AND SEDIMENT CONTROL ITEMS, THE LOCATION AND SIZE OF WHICH ARE DETAILED ON THE PLANS, SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY CLEARING OR EARTHWORK OPERATIONS. CONDITIONS THAT DEVELOP DURING CONSTRUCTION THAT WERE NOT FORESEEN DURING DESIGN STAGE; THAT REQUIRE ADDITIONAL OR MODIFIED TEMPORARY OR PERMANENT BMP'S SHALL BE APPROVED BY THE DESIGN ENGINEER AND REFLECTED ON THE REVISED SWPPP.

SEDIMENT PONDS, SEDIMENT TRAPS, SEDIMENT CONTROLS, DIVERSIONS, AND PERIMETER SEDIMENT CONTROLS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AND WITHIN 7 DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL DISTURBED AREAS ARE RE–ESTABLISHED WITH TEMPORARY VEGETATION. NO SEDIMENT CONTROLS SHALL BE PLACED IN A STREAM.

TRENCH DEWATERING OR GROUND WATER, WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATER SHALL NOT BE DISCHARGED TO STREAMS OR THE STORM SEWER SYSTEM.

THE SWPPP, NOTES AND DETAILED DRAWINGS ARE INTENDED TO SERVE AS BASIC GUIDELINES. ALL EROSION CONTROL PRACTICES SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE ODNR RAINWATER AND LAND DEVELOPMENT MANUAL.

ADDITIONAL EROSION CONTROL BMP'S MAY BE MANDATED BY THE GOVERNING AGENCY AT ANY TIME DURING THIS PROJECT AS UNFORESEEN SITUATIONS MAY ARISE THAT WARRANT FURTHER EROSION AND SEDIMENT CONTROL PRACTICES.

CONSTRUCTION MUST COMPLY WITH ALL LOCAL EROSION AND SEDIMENT CONTROL REGULATION. DISTURBED AREAS REMAINING DORMANT FOR OVER ONE YEAR OR AT FINAL GRADE, WILL HAVE PERMANENT EROSION CONTROLS APPLIED WITHIN SEVEN DAYS.

INDIVIDUAL BUILDING LOTS
BUILDERS ARE RESPONSIBLE FOR EROSION CONTROL ON EACH INDIVIDUAL BUILDING LOT

ACCEPTABLE EROSION CONTROL TIMETABLE

	J	F	M	A	M	J	J	A	S	O	N	D
TEMP. SEEDING				•	•	•	•	•	•	•		
PERM. SEEDING				•	•	•	•	•	•			
LANDSCAPING			•	•	•					•	•	•
MULCHING	•	•	•	•	•	•	•	•	•	•	•	•
MAINTENANCE	•	•	•	•	•	•	•	•	•	•	•	•

CLEARING AND GRUBBING
LIMITS OF CLEARING AND GRADING SHALL BE CLEARLY MARKED ON THE SITE WITH SIGNAGE, FLAGGING AND/OR CONSTRUCTION FENCING.

THE CONTRACTOR SHALL LIMIT THE SURFACE AREA OF ERODABLE EARTH MATERIAL EXPOSED BY EXCAVATION, BORROW AND FILL OPERATIONS AND PROVIDE IMMEDIATE PERMANENT OR TEMPORARY CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS OR OTHER WATER COURSES, LAKES, PONDS, WETLANDS OR OTHER AREAS OF WATER IMPOUNDMENT.

STABILIZATION
PERMANENT AND TEMPORARY STABILIZATION ARE DEFINED IN PART VII OF THE OEPA AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM.
OHIO EPA PERMIT NO. OH000004 EFFECTIVE DATE 4/21/18 – EXPIRATION DATE 4/20/23
DISTURBED AREAS MUST BE STABILIZED AS SPECIFIED IN THE FOLLOWING TABLES BELOW:

TEMPORARY STABILIZATION/SEEDING
SEEDING AREAS SHALL BE INSPECTED AND WHERE THE SEED HAS NOT PRODUCED 80% COVER SHALL BE RESEEDED AS NECESSARY BY THE CONTRACTOR. AREAS SHALL BE STABILIZED WITH MULCH WHEN CONDITIONS PROHIBIT SEEDING.

STRAW MULCHING SHALL BE APPLIED AT A RATE 2–3 STANDARD 45 LB. BALES PER 1,000 SQ. FT. OF DISTURBED AREA OR 2 TONS PER ACRE. ALL HYDRO–SEEDING MUST BE STRAW MULCHED ACCORDING TO THE ABOVE SPECIFICATIONS UNLESS IT IS WATERED WEEKLY.

ALL DETENTION PONDS, RETENTION PONDS, WATER QUALITY STRUCTURES, SEDIMENT PONDS, SEDIMENT TRAPS, EARTHEN DIVERSIONS OR EMBANKMENTS SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS OF COMPLETED CONSTRUCTION.

TABLE 2: TEMPORARY STABILIZATION

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROL
ANY DISTURBED AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND NOT AT FINAL GRADE	WITHIN TWO DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS.
ANY DISTURBED AREAS THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA. FOR RESIDENTIAL SUBDIVISIONS, DISTURBED AREAS MUST BE STABILIZED AT LEAST SEVEN DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE FOR THE INDIVIDUAL LOT(S).
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER.	PRIOR TO THE ONSET OF WINTER WEATHER

WINTERIZATION – ANY DISTURBED AREA THAT IS NOT GOING TO BE WORKED FOR 14 DAYS OR MORE MUST BE SEEDED AND MULCHED BY NOVEMBER 1 UNLESS THE SITE CAN BE PERMANENTLY SEEDED BY NOVEMBER 15, OR MUST HAVE A DORMANT SEEDING OR MULCH COVER APPLIED BETWEEN NOVEMBER 1 AND MARCH 1.

WHEN SEASONAL CONDITIONS PROHIBIT THE APPLICATION OF TEMPORARY OR PERMANENT SEEDING, NON–VEGETATIVE SOIL STABILIZATION PRACTICES SUCH AS MULCHING AND MATTING SHALL BE USED.

PERMANENT STABILIZATION/SEEDING

TABLE 1: PERMANENT STABILIZATION

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE.	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE.
ANY AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND AT FINAL GRADE.	WITHIN TWO DAYS OF REACHING FINAL GRADE.
ANY OTHER AREAS AT FINAL GRADE.	WITHIN SEVEN DAYS OF REACHING FINAL GRADE WITHIN THAT AREA.

DITCHES WITH SLOPES GREATER THAN 1.5% SHALL HAVE EROSION CONTROL BLANKETS OR MATTING INSTALLED AS PART OF STABILIZATION MEASURES.

EROSION CONTROL BLANKETS SHALL BE USED TO AID IN ESTABLISHING VEGETATION ON DISTURBED SLOPES STEEPER THAN 6%.

SIDE SLOPES OF ROADS AND DRIVES SHALL BE SEEDED AND BLANKETED IMMEDIATELY UPON COMPLETION.

SEEDING AND MULCHING: ALL SITE AREAS NOT OTHERWISE COVERED BY PROPOSED BUILDINGS, PAVEMENTS, OR LANDSCAPE PLANTINGS SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH THE LANDSCAPE PLAN.

A SITE IS NOT CONSIDERED TO BE STABLE UNTIL THE FOLLOWING ITEMS ARE COMPLETED:
1) A PERENNIAL VEGETATIVE COVER (OR OTHER PERMANENT STABILIZATION PRACTICE) HAS GROWN TO A 75% DENSITY THROUGHOUT THE ENTIRE DISTURBED AREA.
2) ALL TEMPORARY EROSION AND SEDIMENT CONTROLS HAVE BEEN REMOVED AND DISPOSED OF PROPERLY.
3) ALL TRAPPED SEDIMENT HAS BEEN PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION OR RE–SUSPENSION.
4) ALL CONSTRUCTION ACTIVITIES HAVE CEASED.

EROSION CONTROL NOTES
1. INSTALL GEOFAB OR EQUAL FABRIC FENCE AS SHOWN, 1.5' MIN. IN HEIGHT, AS PER MANUFACTURER'S RECOMMENDATIONS. THIS FABRIC FENCE WILL BE USED DURING GRADING OPERATIONS AND UNTIL ALL BARE AREAS ARE STABILIZED.
2. EROSION CONTROL BLANKETS WITH MATTING WILL BE USED ON DITCHES GREATER THAN 1.5% AND ALL OTHER SLOPES GREATER THAN 6% GRADE.
3. NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.
4. ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED WITHIN 7 DAYS OF OBTAINING FINAL GRADE PER O.D.O.T. 659.04, 659.12 AND 659.13.

CONSTRUCTION ENTRANCE
A STONED CONSTRUCTION ENTRANCE SHALL BE INSTALLED FOR ALL INGRESS & EGRESS TO THE SITE. THE MINIMUM DIMENSIONS OF THE DRIVE SHALL BE 20 FEET WIDE AND 70 FEET LONG. THE STONE SHALL BE 6 INCHES DEEP WITH AN UNDERLAIN GEOTEXTILE FABRIC. THE DRIVE SHALL BE INSTALLED PRIOR TO ANY CLEARING AND GRUBBING. SEDIMENTS SHALL BE REMOVED FROM ROADWAYS DAILY. CONSTRUCTION VEHICLES ARE LIMITED TO THE CONSTRUCTION ACCESS ROADS NOTED ON THE PLAN.

PERMANENT STABILIZATION OF CONVEYANCE CHANNELS
OPERATORS SHALL UNDERTAKE SPECIAL MEASURES TO STABILIZE CHANNELS AND OUTFALLS AND PREVENT EROSIVE FLOWS. MEASURES MAY INCLUDE SEEDING, DORMANT SEEDING (AS DEFINED IN THE LATEST EDITION OF ODNR RAINWATER AND LAND DEVELOPMENT MANUAL), MULCHING, EROSION CONTROL MATTING, SODDING, RIPRAP NATURAL CHANNEL DESIGN WITH BIO ENGINEERING TECHNIQUES OR ROCK CHECK DAMS.

TIMING
SEDIMENT CONTROL STRUCTURES SHALL BE FUNCTIONAL THROUGHOUT THE COURSE OF EARTH DISTURBING ACTIVITY. SEDIMENT BASINS AND PERIMETER SEDIMENT BARRIERS SHALL BE IMPLEMENTED PRIOR TO GRADING AND WITHIN SEVEN DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL THE SLOPE DEVELOPMENT AREA IS PERMANENTLY RESTABILIZED, AS CONSTRUCTION PROGRESSES AND THE TOPOGRAPHY IS ALTERED, APPROPRIATE CONTROLS MUST BE CONSTRUCTED TO ADDRESS THE CHANGING DRAINAGE PATTERNS.

TRENCH AND GROUND WATER CONTROL
THERE SHALL BE NO TURBID DISCHARGES TO SURFACE WATERS OF THE STATE RESULTING FROM DEWATERING ACTIVITIES. IF TRENCH OR GROUND WATERS CONTAIN SEDIMENT, IT MUST PASS THROUGH A SEDIMENT SETTLING POND OR OTHER EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE, PRIOR TO BEING DISCHARGED FROM THE CONSTRUCTION SITE. ALTERNATIVELY, SEDIMENT MAY BE REMOVED BY SETTLING IN PLACE OR DEWATERING INTO A SUMP PIT, FILTER BAG OR COMPARABLE PRACTICE. GROUND WATER DEWATERING WHICH DOES NOT CONTAIN SEDIMENT OR OTHER POLLUTANTS ARE NOT REQUIRED TO BE TREATED PRIOR TO DISCHARGE, HOWEVER, CARE MUST BE TAKEN WHEN DISCHARGING GROUND WATER TO ENSURE THAT IT DOES NOT BECOME POLLUTANT–LADEN BY TRAVERSING OVER DISTURBED SOILS OR OTHER POLLUTANT SOURCES.

SILT FENCE & DIVERSIONS
SHEET FLOW RUNOFF FROM DENUDED AREAS SHALL BE INTERCEPTED BY SILT FENCE OR DIVERSIONS TO PROTECT ADJACENT PROPERTIES AND WATER RESOURCES FROM SEDIMENT TRANSPORTED VIA SHEET FLOW. WHERE INTENDED TO PROVIDE SEDIMENT CONTROL, SILT FENCES SHALL BE PLACED ON A LEVEL CONTOUR. THE EPA PERMIT NO. OHC000003 DOES NOT PRECLUDE THE USE OF OTHER SEDIMENT BARRIERS DESIGNED TO CONTROL SHEET FLOW RUNOFF. SILT FENCE IS NOT PERMITTED TO BE USED FOR CONTROLLING CONCENTRATED SURFACE WATER FLOW (ONLY SHEET FLOW).

STORMWATER DIVERSION PRACTICES SHALL BE USED TO KEEP RUNOFF AWAY FROM DISTURBED AREAS AND STEEP SLOPES WHERE PRACTICAL. SUCH DEVICES, WHICH INCLUDE SWALES, DIKES OR BERMS, MAY RECEIVE FROM AREAS UP TO 10 ACRES.

IF SMALL RILLS OR GULLIES DEVELOP, TEMPORARY DIVERSIONS SHALL BE INSTALLED UNTIL SATISFACTORY SEEDING IS ESTABLISHED.

INLET PROTECTION
OTHER EROSION AND SEDIMENT CONTROL PRACTICES SHALL MINIMIZE SEDIMENT LADEN WATER ENTERING ACTIVE STORM DRAIN SYSTEMS, UNLESS THE STORM DRAIN SYSTEM DRAINS TO A SEDIMENT POND. INLET PROTECTION IS MANDATORY WHERE SEDIMENT SETTLING PONDS WILL NOT BE IMPLEMENTED.

STREAM CROSSINGS
STREAM CROSSINGS SHALL BE CONSTRUCTED ENTIRELY OF STONE, ROCK OR CLEAN RECYCLED CONCRETE. SOIL OR EARTHEN MATERIAL MAY NOT BE USED. A 20 FOOT STONE APRON ON EITHER SIDE OF THE STREAM SHALL BE CONSTRUCTED TO PREVENT LOCALIZED SEDIMENTATION. ALL DISTURBED AREAS OF THE BANK WITHIN 50 FEET OF THE STREAM SHALL BE STABILIZED WITH SEED AND MULCH WITHIN 2 DAYS OF THE DISTURBANCE.

POST CONSTRUCTION BMP'S AND RATIONALE
1. PERMEABLE PAVERS, UTILIZED TO MAXIMIZE PARKING AREAS NEEDED WITHIN THIS DOWNTOWN AREA DEVELOPMENT.

NON–SEDIMENT POLLUTANTS CONTROLS
NO SOLID (OTHER THAN SEDIMENT) OR LIQUID WASTE, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED IN STORMWATER RUNOFF. ALL NECESSARY BMP'S MUST BE IMPLEMENTED TO PREVENT THE DISCHARGE OF NON–SEDIMENT POLLUTANTS TO THE DRAINAGE SYSTEM OF THE SITE OR SURFACE WATERS OF THE STATE. UNDER NO CIRCUMSTANCE SHALL CONCRETE TRUCKS WASHOUT DIRECTLY INTO A DRAINAGE CHANNEL, STORM SEWER OR SURFACE WATERS OF THE STATE. NO EXPOSURE OF STORMWATER TO WASTE MATERIALS IS RECOMMENDED.

WASTE DISPOSAL
CONTAINERS (E.G., DUMPSTERS, DRUMS) SHALL BE AVAILABLE FOR DISPOSAL OF DEBRIS, TRASH, HAZARDOUS OR PETROLEUM WASTES. ALL CONTAINERS MUST BE COVERED AND LEAK–PROOF. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THE PERTINENT MATERIAL.

CONSTRUCTION CHEMICAL COMPOUNDS
AREA SHALL BE DESIGNATED FOR MIXING OR STORAGE OF COMPOUNDS SUCH AS FERTILIZERS, LIME, ASPHALT OR CONCRETE. THESE DESIGNATED AREAS SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS OR OTHER STORMWATER DRAINAGE AREA.

CONCRETE WASH WATER
ALL DESIGNATED CONCRETE WASHOUT AREAS SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS OR OTHER STORMWATER DRAINAGE AREAS. CONCRETE WASHOUT AREA SHALL BE LINED AND WASHOUT WATER SHALL BE PUMPED OUT AND PROPERLY DISPOSED OF.

EQUIPMENT FUELING & MAINTENANCE
EQUIPMENT FUELING & MAINTENANCE SHALL BE IN DESIGNATED AREAS ONLY.

OFF–SITE TRAFFIC
OFF–SITE VEHICLE TRACKING OF SEDIMENTS AND DUST GENERATION SHALL BE MINIMIZED.

ADJACENT ROADS SHALL BE KEPT FREE OF DIRT AND DEBRIS AT ALL TIMES. TRACKING OR SPILLAGE OF MUD, DIRT, OR DEBRIS UPON STREETS IS PROHIBITED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SUCH OCCURRENCE, BE IT ON STREETS OR ADJACENT PROPERTY(S) AND SHALL CLEAN UP DEBRIS IMMEDIATELY AND AS DIRECTED BY THE OWNER OR MUNICIPAL ENGINEER. IF THE CONTRACTOR FAILS TO KEEP THE WORK AREA CLEAN OF DEBRIS, OR FAILS TO CLEAN THE STREETS OF MUD AND DIRT FROM THIS CONSTRUCTION SITE, THE OWNER OR MUNICIPAL AUTHORITY MAY TAKE ACTION AND ASSESS THE CONTRACTOR FOR ANY COSTS THAT ARE INCURRED.

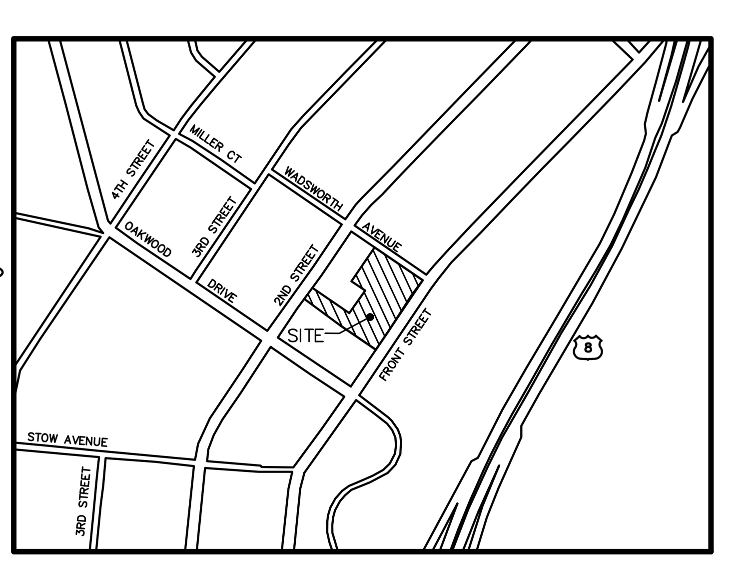
OPEN BURNING
OPEN BURNING IS NOT PERMITTED.

SPILL REPORTING REQUIREMENTS
SPILL ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST, KITTY LITTER OR OTHER ABSORBENT MATERIAL AND DISPOSED OF WITH THE TRASH AT A LICENSED LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL–BASED PAINTS AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. SPILLS SHALL BE REPORTED TO OHIO EPA (1–800–282–9378) WITHIN ONE HOUR OF DISCOVERY OF THE RELEASE. THE CONTRACTOR SHALL HAVE ON–SITE A 20 GALLON OVER PACK SPILL KIT BY EXCEL EQUIPMENT OR APPROVED EQUAL NEXT TO THE DESIGNATED MAINTENANCE REPAIR AND FUELING AREA THROUGHOUT CONSTRUCTION. A RESPONSE GUIDELINE BOOK SHALL BE SUPPLIED BY THE MANUFACTURER. THIS BOOK SHALL BE POSTED AT THE SITE.

THE CONTRACTOR SHALL CONTACT THE OHIO EPA AT (1–800–282–9378), THE LOCAL FIRE DEPARTMENT AND THE LOCAL EMERGENCY PLANNING COMMITTEE IN THE EVENT OF A PETROLEUM SPILL (>25 GALLONS) OR THE PRESENCE OF SHEEN WITHIN 30 MINUTES OF A SPILL OF 25 GALLONS OR MORE. THIS INFORMATION MUST BE POSTED AT THE SITE.

A SPILL PREVENTION CONTROL AND COUNTERMEASURES
A SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN MUST BE DEVELOPED FOR SITES WITH ONE ABOVE–GROUND STORAGE TANK OF 660 GALLONS OR MORE, TOTAL ABOVE–GROUND STORAGE OF 1,330 GALLONS, OR BELOW–GROUND STORAGE OF 4,200 GALLONS OF FUEL.

EROSION CONTROL NOTES
1. INSTALL GEOFAB OR EQUAL FABRIC FENCE AS SHOWN, 1.5' MIN. IN HEIGHT, AS PER MANUFACTURER'S RECOMMENDATIONS. THIS FABRIC FENCE WILL BE USED DURING GRADING OPERATIONS AND UNTIL ALL BARE AREAS ARE STABILIZED.
2. EROSION CONTROL BLANKETS WITH MATTING WILL BE USED ON DITCHES GREATER THAN 1.5% AND ALL OTHER SLOPES GREATER THAN 6% GRADE.
3. NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.
4. THE TYPE OF CONSTRUCTION ACTIVITY TO BE PERFORMED WILL BE AS NECESSARY TO CONSTRUCT ROADWAY, WATER MAIN, SANITARY SEWER AND A STORM WATER SYSTEM FOR A RESIDENTIAL SUBDIVISION.



LOCATION MAP
NO SCALE

CONTAMINATED SOILS
ALL CONTAMINATED SOIL MUST BE TREATED AND/OR DISPOSED IN OHIO EPA APPROVED SOLID WASTE MANAGEMENT FACILITIES OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITIES (TSDFS).

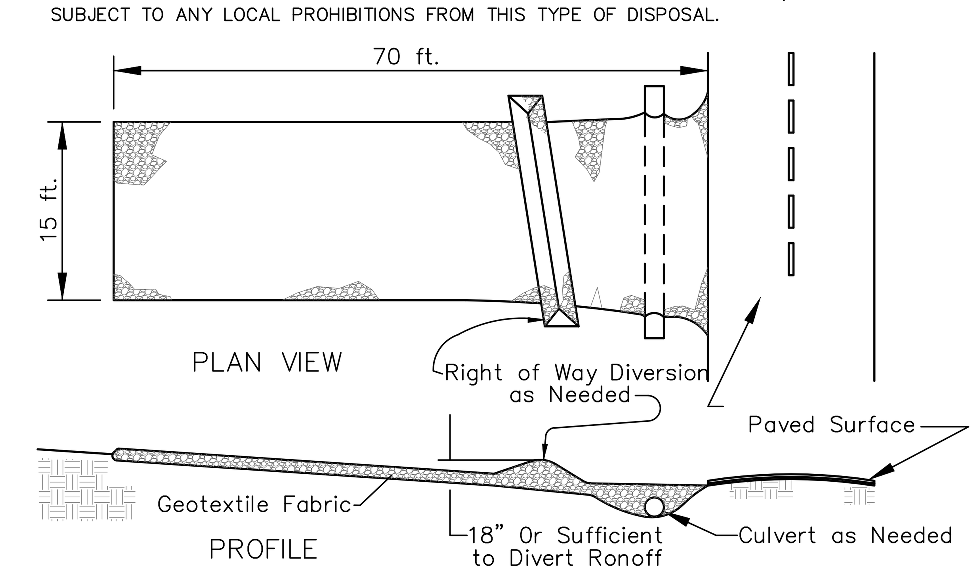
CONSTRUCTION & DEMOLITION DEBRIS
ALL CONSTRUCTION & DEMOLITION DEBRIS (C&DD) WASTE SHALL BE DISPOSED OF IN AN OHIO EPA APPROVED C&DD LANDFILL AS REQUIRED BY OHIO REVISED CODE (ORC) 3714, CONSTRUCTION DEBRIS MAY BE DISPOSED OF ON–SITE, BUT DEMOLITION DEBRIS MUST BE DISPOSED IN A OHIO EPA APPROVED LANDFILL. ALSO, MATERIALS WHICH CONTAIN ASBESTOS MUST COMPLY WITH AIR POLLUTION REGULATIONS (SEE OHIO ADMINISTRATIVE CODE (OAC) 3745–20).

DUST CONTROLS/SUPPRESSANTS
WATER IS TO BE USED AS A DUST SUPPRESSANT. USED OIL MAY NOT BE USED AS A DUST SUPPRESSANT. NO CHEMICAL DUST SUPPRESSANT SHALL BE APPLIED NEAR CATCH BASINS, STORM SEWERS OR OTHER DRAINAGE WAYS.

TRENCH AND GROUND WATER CONTROL
THERE SHALL BE NO TURBID DISCHARGES TO SURFACE WATERS OF THE STATE RESULTING FROM DEWATERING ACTIVITIES. IF TRENCH OR GROUND WATERS CONTAIN SEDIMENT, IT MUST PASS THROUGH A SEDIMENT SETTLING POND OR OTHER EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE, PRIOR TO BEING DISCHARGED FROM THE CONSTRUCTION SITE. ALTERNATIVELY, SEDIMENT MAY BE REMOVED BY SETTLING IN PLACE OR DEWATERING INTO A SUMP PIT, FILTER BAG OR COMPARABLE PRACTICE. GROUND WATER DEWATERING WHICH DOES NOT CONTAIN SEDIMENT OR OTHER POLLUTANTS ARE NOT REQUIRED TO BE TREATED PRIOR TO DISCHARGE, HOWEVER, CARE MUST BE TAKEN WHEN DISCHARGING GROUND WATER TO ENSURE THAT IT DOES NOT BECOME POLLUTANT–LADEN BY TRAVERSING OVER DISTURBED SOILS OR OTHER POLLUTANT SOURCES.

CLEAN HARD FILL
BRICKS, HARDENING CONCRETE AND SOIL WASTE SHALL BE FREE FROM CONTAMINATION WHICH MAY LEACH CONSTITUENTS TO WATERS OF THE STATE.

CLEAN CONSTRUCTION WASTES THAT WILL BE DISPOSED INTO THE PROPERTY, SHALL BE SUBJECT TO ANY LOCAL PROHIBITIONS FROM THIS TYPE OF DISPOSAL.



CONSTRUCTION ENTRANCE DETAIL
NO SCALE

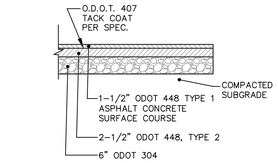
STATE OF OHIO
DENNIS W. STOFFER
E-76698
REGISTERED PROFESSIONAL ENGINEER

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET ST., SUITE 201
FAIRLAWN, OHIO 44333
(330) 836–6661

FRONT STREET SUMMIT DD PARKING LOT EXPANSION
SWPPP NOTES
CITY OF CUYAHOGA FALLS

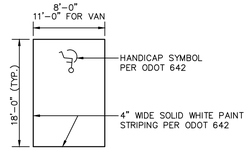
DWG FILE: F:\front Street\3d Dwgs\General Sheets.dwg (SWPPP-4)
DRAWN BY: TG
DATE: 2/10/2021
DESIGNED BY: DWS
REVISION: DATE:
REVISION: DATE:

C-109



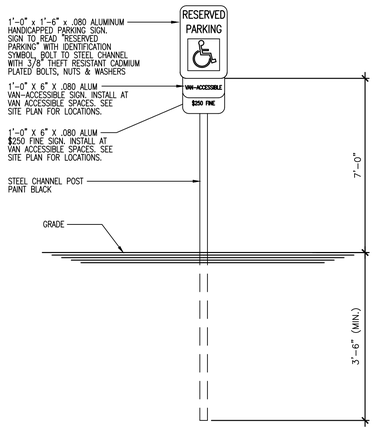
ASPHALT PARKING AREA & DRIVE

NO SCALE



HANDICAP PARKING LOT STRIPING

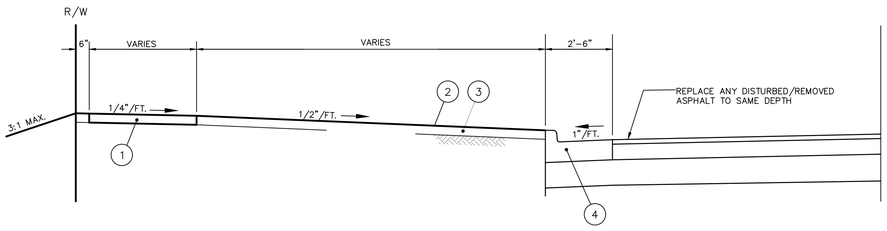
NO SCALE



NOTE: HANDICAPPED PARKING SIGN SHALL CONFORM TO CURRENT STATE AND LOCAL CODES AND REGULATIONS.

HANDICAP PARKING SIGN DETAIL

NO SCALE

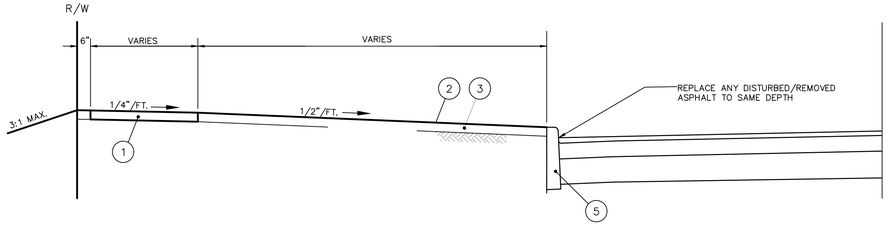


CURB AND SIDEWALK REPLACEMENT
WADSWORTH AVENUE

SCALE: 3/8" = 1'-0"

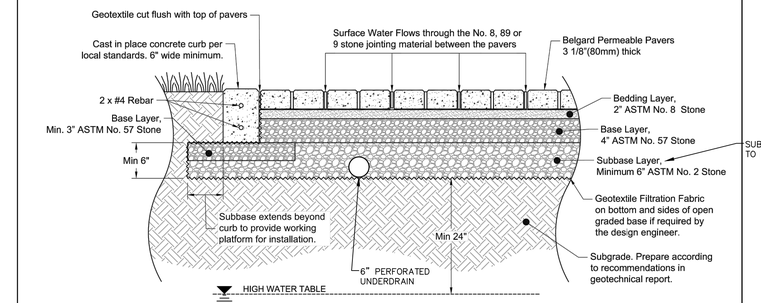
SPECIFICATION REFERENCE

1. ITEM 608 – 4" THICK CONCRETE SIDEWALK, 6" AT DRIVEWAYS, WITH 2" AGGREGATE BASE
2. ITEM 659 – SEEDING AND MULCHING, CLASS 1
3. ITEM 653 – 4" TOPSOIL FURNISHED AND PLACED (TOPSOIL MUST BE PLACED TO TOP OF CURB)
4. ITEM 609 – CONCRETE COMBINATION CURB AND GUTTER (O.D.O.T. TYPE 2)
5. ITEM 609 – CONCRETE CURB (O.D.O.T. TYPE 6)



CURB AND SIDEWALK REPLACEMENT
FRONT STREET

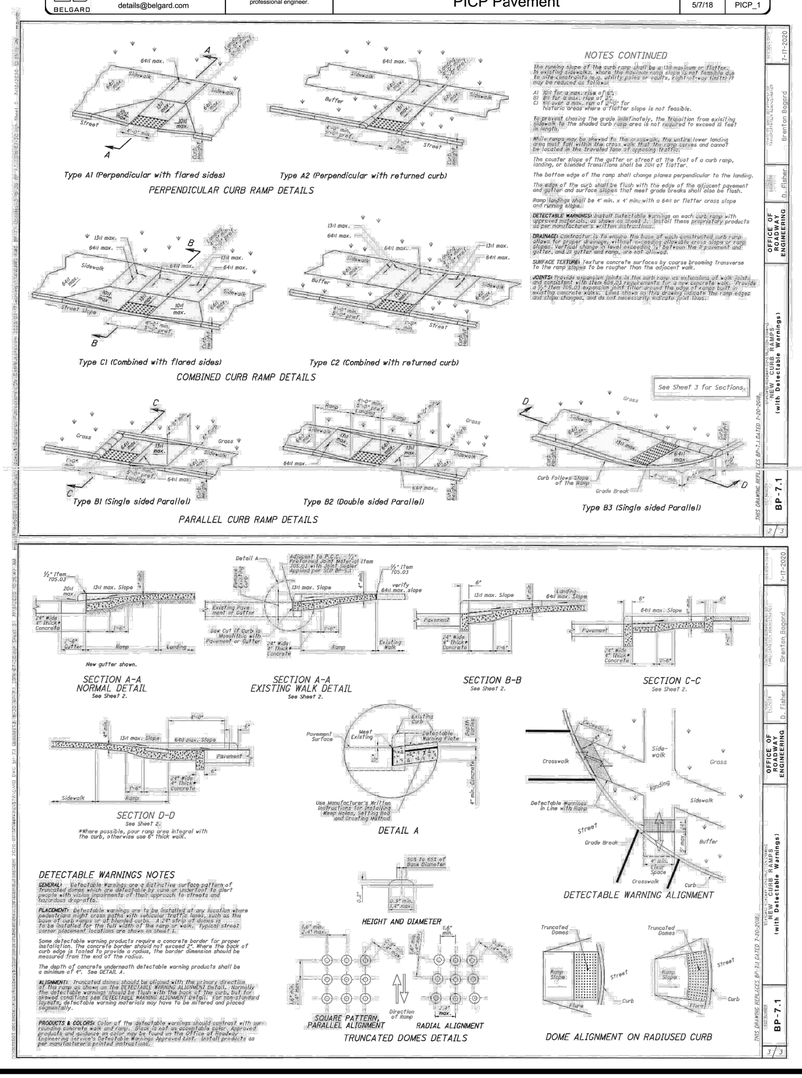
SCALE: 3/8" = 1'-0"



Design Notes:

1. Depth of subbase subject to site specific hydraulic and structural requirements. Contact Belgard Commercial for design assistance.
2. Paver dimensions subject to aspect and plan ratio requirements based on traffic loading.
3. Geotechnical engineer needs to balance structural stability and soil infiltration when recommending subgrade conditions.
4. Where the filtration geotextile is used, verify with the manufacturer that the material is not subject to clogging and meets requirements of AASHTO M-288.
5. ASTM No. 2 stone may be substituted with No. 3 or No. 4 stone.
6. Strictly pedestrian applications may substitute base/subbase layers with one 6" base layer of ASTM No. 57 stone.

BELGARD belgardcommercial.com 877-235-4273 details@belgard.com	This drawing is for illustrative purposes only and should not be used for construction without the signature of a registered professional engineer.	Belgard Permeable Paving Detail PICP Pavement	Scale: N.T.S. / Drawn by: MAH Date: 5/7/18 / Drawing number: PICP_1



STATE OF OHIO
DENNIS W. STOFFER
E-76698
REGISTERED PROFESSIONAL ENGINEER

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET ST., SUITE 201
FAIRLAWN, OHIO 44333
(330) 836-6661

FRONT STREET SUMMIT DD PARKING LOT EXPANSION

SITE CONSTRUCTION DETAILS

CITY OF CUYAHOGA FALLS

DRG TITLE:	P:\Front Street\CAD Dwgs\General Sheets\dwg (Details)
DRAWN BY:	TG
DATE:	2/10/2021
DESIGNED BY:	DWS
REVISION:	DATE:
REVISION:	DATE:

C-110

SHEET 11 OF 17

Environmental Design Group
AKRON / CLEVELAND / COLUMBUS
HQ 450 GRANT ST., AKRON, OH 44311
P 330.375.1390 / TF 800.835.1390
W ENVDESIGNGROUP.COM

811 Know what's below. Call before you dig.

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET ST., SUITE 201
FAIRLAWN, OHIO 44333
(330) 836-6661

SCALE: 1" = 30'

Wadsworth Avenue Street Tree Requirement:
Tree Lawn of 14.33'.
Large Shade Tree selected.
265.96'/100*1=3 Trees required.
3 Shown.

CODE NOTES:

1. THIS PLAN CONFORMS TO THE CUYAHOGA FALLS CODE 1145.
2. STREET TREES HAVE BEEN SHOWN IN ACCORDANCE TO SECTION 1145.05.
3. TREE PRESERVATION SECTION WAS REVIEWED FOR COMPLIANCE, BUT NO EXISTING TREES WERE PRESENT ON THE SITE PRIOR TO REDEVELOPMENT.
4.

LEGEND:

- Shade Tree
- Street Tree/ Ornamental Tree
- Shrubs
- Fenceline with Brick Piers (spaced 16' apart)

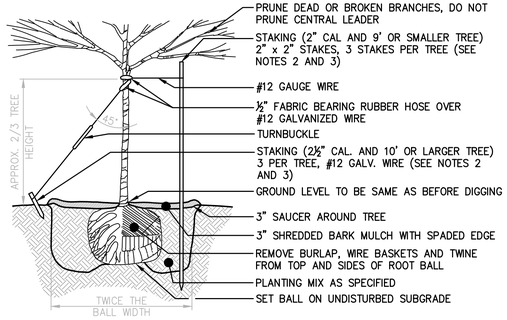
PLANTING NOTES:

1. THIS SHEET FOR PLANTING REFERENCES ONLY. SEE DETAILS FOR PLANTING INSTALLATION.
2. ALL PLANTING & SEEDING SHALL BE INSTALLED BY AN OHIO CERTIFIED NURSERY TECHNICIAN(S) OR NATIONALLY CERTIFIED LANDSCAPE TECHNICIAN(S).
3.CONTRACTOR TO STAKE LOCATIONS OF TREES AND LARGE SHRUBS AND OUTLINE BED AREAS OF PERENNIALS AND GROUNDCOVER FOR ACCEPTANCE BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
4. GROWING MEDIUM SHALL CONSIST OF 1/3 TOPSOIL, 1/3 SHARP, CLEAN BEDDING SAND, 1/3 DECOMPOSED LEAF HUMUS BY VOLUME. GROWING MEDIUM SHALL BE MECHANICALLY COMBINED BY A SUPPLIER. GROWING MEDIUM SHALL HAVE A PH BETWEEN 6.2 AND 6.8. FINAL BLEND FROM PART 'A' SHALL BE CLASSIFIED IN THE "SANDY LOAM" PORTION OF THE U.S.D.A SOIL TEXTURAL TRIANGLE.
5. DECOMPOSED LEAF MULCH: DECOMPOSED, NITROGEN-TREATED, OF UNIFORM TEXTURE, FREE OF CHIPS, STONES, STICKS, SOIL, OR TOXIC MATERIALS. SHALL CONFORM TO THE FOLLOWING:
   A.100% SHALL PASS THROUGH A 1" SCREEN.
   B. PATHOGEN FREE; TIME AND TEMPERATURE TESTS MINIMUM 55 DEGREE CELSIUS FOR A MINIMUM OF THREE DAYS.
   C. HEAVY METAL CONTENT SHALL NOT EXCEED OHIO EPA CLASS 1.
   D. ORGANIC CONTENT SHALL BE BETWEEN 35% AND 75%; EACH SOURCE SHALL NOT VARY MORE THAN 5%.
   E. INERT CONTAMINATION SHALL BE LESS THAN 1% BY WEIGHT.
   F. MATERIAL SHALL BE CURED FOR AT LEAST 90 DAYS.
   G. SOLUABLE SALTS SHALL BE BETWEEN 1 – 5 MMHOLS.
   H. PH SHALL BE BETWEEN 6.0 AND 8.0
6. CONTRACTOR MAY REUSE SURFACE SOIL STOCKPILED ON THE SITE. VERIFY SUITABILITY OF SURFACE SOIL TO PRODUCE TOPSOIL MEETING REQUIREMENTS AND AMEND WHEN NECESSARY. SUPPLEMENT WITH IMPORTED TOPSOIL WHEN QUANTITIES ARE INSUFFICIENT. CLEAN TOPSOIL OF ROOTS, PLANTS, SODS, STONES, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH.
7. PROVIDE QUALITY, SIZE, GENUS, SPECIES, AND VARIETY OF TREES AND SHRUBS INDICATED, COMPLYING WITH APPLICABLE REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK."
8. SEEDING & MULCHING PER ODOT ITEM 659. SEED MIXTURE AS PER NOTE 8.
9. SEED: PROVIDE CERTIFIED GRASS SEED BLENDS OR MIXES, PROPORTIONED BY WEIGHT FOR APPROVAL BY OWNER'S REP. SEED SHALL BE PROFESSIONALLY MIXED WITH 30% KENTUCKY BLUEGRASS; 35% FESCUE (FESTUCA CVLT.) SUCH AS PENNLAWN, 'FINELAWN PETITE" OR 'CROSS FIRE'; 35% PERENNIAL RYE GRASS SUCH AS CITATION II OR MANHATTAN. SOW SEED AT A MINIMUM OF 5 LBS. PER 1000 SF. MINIMUM 90% GERMINATION.
10. DITCHES WITH GRADES GREATER THAN 1.5% AND ALL OTHER SLOPES GREATER THAN 5:1 WILL HAVE EROSION CONTROL BLANKETS/MATTING INSTALLED AS PER ODOT 671. MATTING TO BE ODOT ITEM 712.11 SEE ODOT DRAWING DM-4.2 FOR INSTALLATION.
11. CONTRACTOR TO GUARANTEE AND WARRANT ALL PLANT MATERIAL FOR 1 YEAR (12 MONTHS) STARTING THE DAY OF FINAL ACCEPTANCE FROM THE OWNER. THE GUARANTEE RESERVES THE RIGHT OF THE OWNER TO HAVE ANY PLANT MATERIAL REPLACED AT THE OWNER'S DISCRETION SHOULD THE OWNER DETERMINE THAT A PARTICULAR PLANT HAS DIED OR IS IN DECLINE AT THE SOLE COST OF THE CONTRACTOR AND AT NO COST TO THE OWNER.
12. THE CONTRACTOR IS TO MAINTAIN ALL PLANTINGS FOR A PERIOD OF ONE YEAR (12 MONTHS) STARTING THE DAY OF FINAL ACCEPTANCE FROM THE OWNER. THE MAINTENANCE IS TO INCLUDE, BUT NOT LIMITED TO: ALL WATERING, MOWING, FERTILIZING, PRUNING, WEEDING, AND GENERAL CLEAN UP OF THE PLANTING AREAS. THIS MAINTENANCE IS TO BE DONE ON A REGULAR BASIS TO BE AGREED UPON WITH THE OWNER.

FRONT STREET SUMMIT DD PARKING LOT EXPANSION
TREE PRESERVATION AND LANDSCAPE PLAN
CITY OF CUYAHOGA FALLS

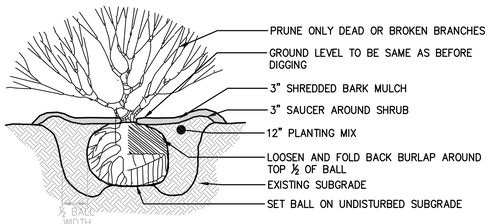
DWG FILE: F:\FRONT STREET\DWG\BASE\FRONT DESIGN
DRAWN BY: bsp
DATE: 2/10/2021
DESIGNED BY: bsp
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:

L-101
SHEET 12 OF 17



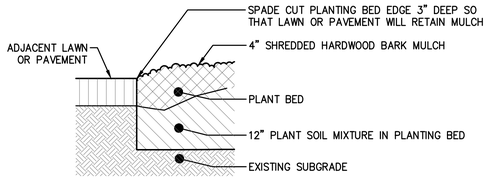
NOTES:
1. REMOVE BURLAP, WIRE BASKETS AND TWINE FROM TOP AND SIDES OF ROOT BALL. CENTER TREE IN HOLE SET TOP OF BALL 1" ABOVE FINISH GRADE.
2. STAKING AND GUYING TREES IS OPTIONAL, HOWEVER THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLED TREES STAYING PLUMB AND STABLE. IF A NON-STAKED TREE MOVES OUT OF PLUMB DURING THE WARRANTY PERIOD THE CONTRACTOR SHALL STRAIGHTEN AND STAKE THE TREE AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL RETURN TO REMOVE ALL STAKES, GUYS & ASSOCIATED HARDWARE ON THE TREES ONE YEAR AFTER STAKING OR PER THE DIRECTION OF THE OWNER OR LANDSCAPE ARCHITECT.

1/13 DECIDUOUS TREE PLANTING
NOT TO SCALE

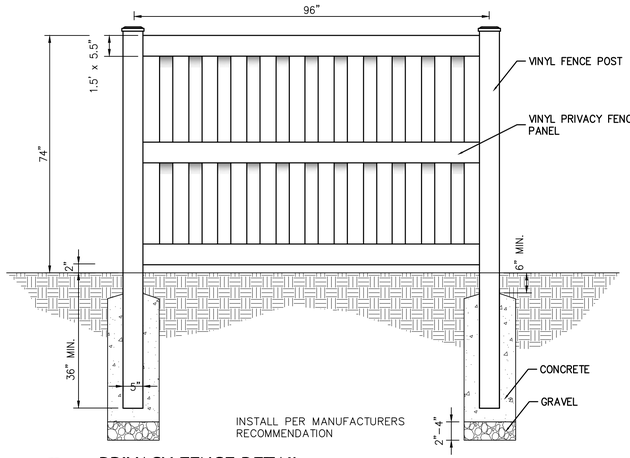


NOTES:
1. PLANTING MIX TO CONSIST OF 1" COMPOST PER 6" OF TOPSOIL.
2. COMPOST SHALL CONSIST OF STERILIZED, COMPOSTED MATERIAL (SWEET PEAT OR OTHER APPROVED EQUAL). CONTRACTOR SHALL SUBMIT SAMPLE TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION OF PLANTS.
3. MULCH TO FORM CONTINUOUS SHRUB BEDS.

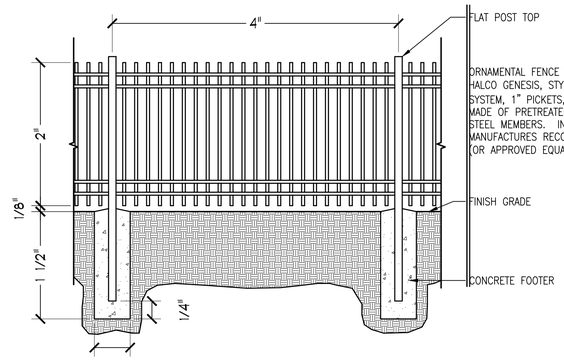
2/13 SHRUB PLANTING
NOT TO SCALE



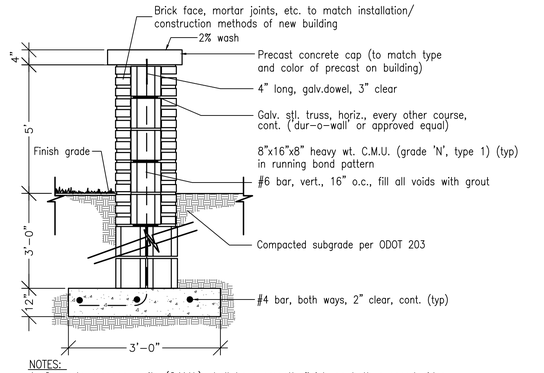
3/13 PLANTING BED SPADE CUT EDGING
NOT TO SCALE



4/13 PRIVACY FENCE DETAIL
NOT TO SCALE



5/13 ORNAMENTAL FENCE DETAIL
NOT TO SCALE



NOTES:
1. Concrete masonry units (C.M.U.) shall have smooth finish on both exposed sides.
2. C.M.U.'s shall conform to ASTM C90.
3. C.M.U.'s (including 4" exposed above grade) and conc. below grade shall be thoroughly sealed with a bituminous sealer to be approved by owner.
4. C.M.U.'s more than 4" above grade shall be painted with Sherwin-Williams Loxon Primer, and finish painted with Sherwin-Williams A-100 Acrylic Latex Paint, satin finish, color: Cylinder Cream.
5. All mortar to be type 'M', latex modified.

6/13 BRICK PIER DETAIL
NOT TO SCALE

PLANT LIST

Key	Quantity	Botanical Name	Common Name	Size	Root	Notes
		Buffer Planting				
BU GV	103	Buxus 'Green Velvet'	Green Velvet Boxwood	18"	B&B	
CA BE	8	Carpinus betula 'Fastigiata'	Pyramidal European Hornbeam	2"	B&B	
PL BG	5	Platanus x acerifolia 'Bloodgood'	Bloodgood London Planetree	2-1/2"	B&B	
VI NE	71	Viburnum p. 'Newport'	Newport Viburnum	24"	B&B	
		Parking Island Trees				
GL TR	22	Gleditisia tri. inermis "Shademaster'	Shademaster Honeylocust	2-1/2""	B&B	
		Street Trees				
PL BG	3	Platanus x acerifolia 'Bloodgood'	Bloodgood London Planetree	2-1/2"	B&B	
PR VI	6	Prunus vir. 'Canada Red Select'	Red Select Cherry Tree	2-1/2"	B&B	

*A COMPLETE LIST OF PLANTS, INCLUDING QUANTITIES, SIZES, AND OTHER REQUIREMENTS IS INCLUDED. IN THE EVENT THAT DISCREPANCIES OCCUR BETWEEN QUANTITIES OF PLANTS INDICATED IN THE PLANT LIST AND ON THE DRAWINGS, THE QUANTITIES INDICATED ON THE DRAWINGS SHALL GOVERN.

Environmental Design Group
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159 450 GRANT ST., AKRON, OH 44311
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FRONT STREET SUMMIT DD PARKING LOT EXPANSION

LANDSCAPE DETAILS

CITY OF CUYAHOGA FALLS

DWG FILE: F:\FRONT STREET\DD DWGS\BASE-FRONT DESIGN
DRAWN BY: bsp
DATE: 2/10/2021
DESIGNED BY: bsp
REVISION: DATE:
REVISION: DATE:

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SHEET 13 OF 17

ELECTRICAL ABBREVIATIONS LEGEND

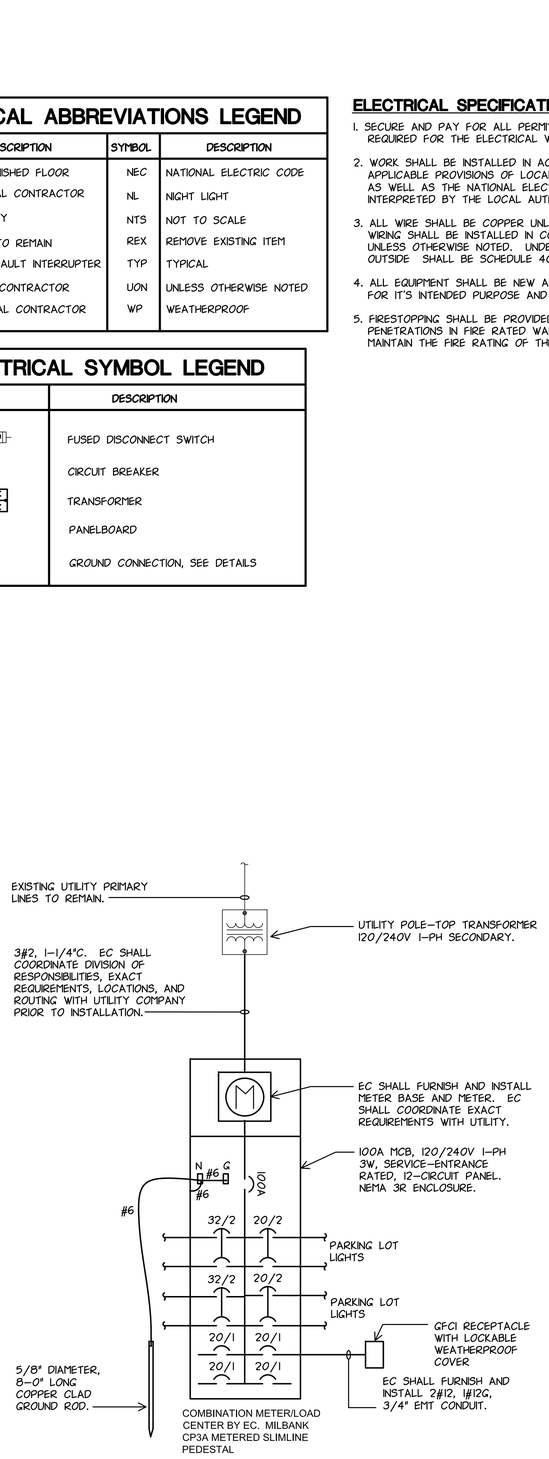
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AFF	ABOVE FINISHED FLOOR	NEC	NATIONAL ELECTRIC CODE
EC	ELECTRICAL CONTRACTOR	NL	NIGHT LIGHT
EM	EMERGENCY	NTS	NOT TO SCALE
ETR	EXISTING TO REMAIN	REX	REMOVE EXISTING ITEM
GFI	GROUND FAULT INTERRUPTER	TYP	TYPICAL
GC	GENERAL CONTRACTOR	UON	UNLESS OTHERWISE NOTED
MC	MECHANICAL CONTRACTOR	WP	WEATHERPROOF

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
2000	FUSED DISCONNECT SWITCH
2000	CIRCUIT BREAKER
OR	TRANSFORMER
	PANELBOARD
	GROUND CONNECTION, SEE DETAILS

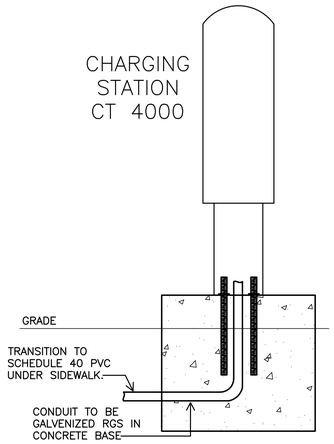
ELECTRICAL SPECIFICATIONS:

1. SECURE AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS REQUIRED FOR THE ELECTRICAL WORK.
2. WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF LOCAL AND STATE CODES (OBC), AS WELL AS THE NATIONAL ELECTRICAL CODE (NEC), AS INTERPRETED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
3. ALL WIRE SHALL BE COPPER UNLESS OTHERWISE NOTED. ALL WIRING SHALL BE INSTALLED IN CONDUIT AS PER THE NEC UNLESS OTHERWISE NOTED. UNDERGROUND CONDUITS INSTALLED OUTSIDE SHALL BE SCHEDULE 40 PVC.
4. ALL EQUIPMENT SHALL BE NEW AND UL LISTED AND LABELED FOR IT'S INTENDED PURPOSE AND FUNCTION.
5. FIRESTOPPING SHALL BE PROVIDED FOR ALL CONDUIT PENETRATIONS IN FIRE RATED WALLS AND FLOORS IN ORDER TO MAINTAIN THE FIRE RATING OF THE WALL AND FLOOR.



ONE-LINE DIAGRAM

SCALE: NONE



CHARGING STATION CT 4000 CONCRETE BASE DETAIL

SCALE: NONE

MOUNTING THE STATION TO A NEW CONCRETE PAD:

BEFORE CASTING INTO NEW CONCRETE, REVIEW THE SITE FOR SUITABILITY TO INSTALL A CT 4000, THE CT 4000'S CLEAN CORD TECHNOLOGY REQUIRES SPACE BEHIND THE POWER STUB-UP FOR THE CORD MANAGEMENT KIT (CMK). TO ENSURE ADEQUATE SPACE, REFER TO THE ILLUSTRATIONS BELOW AND TO THE CT 4000 INSTALLATION TEMPLATE (75-001094-01) INCLUDED IN THIS INSTALLATION KIT.

ALWAYS CHECK LOCAL CODES TO ENSURE COMPLIANCE. YOU MAY NEED TO ADJUST THESE INSTRUCTIONS TO COMPLY WITH CODES THAT APPLY AT YOUR INSTALLATION LOCATION.

THE CONCRETE BLOCK MUST MEASURE AT LEAST 24" ON ALL SIDES.

THE BOLT THREADS MUST EXTEND 3" ABOVE THE CONCRETE.

THE CONDUIT MUST BE AT LEAST 1 VZ" IN DIAMETER AND EXTEND 12" TO 24" ABOVE THE CONCRETE.

REFER TO THE CT 4000 INSTALLATION GUIDE FOR DETAILED INSTALLATION INSTRUCTIONS.

KIT COMPONENTS NEEDED

YOU WILL NEED THE ENTIRE CONTENTS OF THE CT 4000 CONCRETE MOUNT KIT.

FOLLOW THESE STEPS

1. INSTALL TWO NUTS, WITH TWO WASHERS CAPTURED BETWEEN THEM, ONTO EACH OF THE THREE BOLTS, AS ILLUSTRATED. LOCK THEM TOGETHER SO THE LOWER END OF THE UPPER NUT IS LOCATED 6 – 6 \<\" FROM THE BOTTOM OF THE BOLT. THIS SETS THE LENGTH OF THE EXPOSED THREADS.
2. INSERT THE THREE BOLTS THROUGH THE PLASTIC BOLT INSTALLATION TEMPLATE. THIS ENSURES THE RELATIVE POSITION OF THE BOLTS AND THAT THE FLANGE OF THE POLE FITS OVER THE BOLTS.
3. ON THE BOTTOM OF EACH BOLT, INSTALL A NUT, A WASHER, AND A NUT. LOCK THE TWO NUTS TOGETHER SO THAT THE LOWER NUT ALIGNS TO THE BOTTOM OF THE BOLT.
4. IMMEDIATELY AFTER POURING THE CONCRETE, PUSH THE BOLTS INTO THE CONCRETE 6" DEEP, AS ILLUSTRATED. ENSURE CORRECT ALIGNMENT AND THAT THE TOP 3" OF THE BOLTS REMAIN EXPOSED. ROTATE THE BOLTS AS YOU INSERT THEM TO DRAW CONCRETE INTO THE THREADS.
   NOTE:
   - IT IS IMPORTANT TO ROTATE THE BOLTS AS YOU INSERT THEM. THIS ALLOWS THE CONCRETE TO FULLY COAT THE THREADS OF THE BOLTS, REDUCING THE AMOUNT OF TRAPPED AIR.
   - THE PLASTIC BOLT INSTALLATION TEMPLATE TEMPLATE CAN BE LEFT IN PLACE.
5. WHEN THE CONCRETE IS FULLY SET, REMOVE THE UPPER NUTS AND ONE WASHER TO INSTALL THE BOLLARD'S MOUNTING POST.

LIGHTING FIXTURE SCHEDULE

TYPE AND SYMBOL	NO. OF LAMPS AND TYPE	LAMP WATTS	FIXTURE WATTS	VOLTS	MANUFACTURER CATALOG NO.	DIFFUSING LENS	MOUNTING	DESCRIPTION
A	LED 4000K 12,575 LUMENS TYPE TFTM DISTRIBUTION WITH HOUSE-SIDE SHIELD	102W	102W	120/277	LITHONIA DSXI DSXI LED-P3-40K-TFTM-MVOLT-SPA-PER7-HS-DF-DBLXD-EGS LITHONIA #SSS 12-6 4C-DM19AS-UL-DBLXD	PRISMATIC GLASS REFRACTOR	POLE MOUNTED WITH 15'-0" OVERALL MOUNTING HEIGHT 12'-6"SQUARE STRAIGHT STEEL POLE	LED AREA LIGHT FIXTURE, 4000K, TYPE TFTM DISTRIBUTION, BLACK FINISH, FUSED, HOUSE-SIDE SHIELD, 7-PIN RECEPTACLE. EC TO PROVIDE PHOTOCELL FOR DUSK-TIL-DAWN OPERATION. MOUNTED ON A SQUARE, STRAIGHT, STEEL POLE WITH BLACK FINISH. EC TO FIELD INSTALL EXTERNAL GLARE SHIELD.
B	LED 4000K 13,165 LUMENS TYPE T4M DISTRIBUTION	125W	125W	240V	LITHONIA DSXI DSXI LED-P4-40K-T4M-MVOLT-SPA-PER7-DF-DBLXD LITHONIA #SSS 12-6 4C-DM19AS-UL-DBLXD	PRISMATIC GLASS REFRACTOR	POLE MOUNTED WITH 15'-0" OVERALL MOUNTING HEIGHT 12'-6"SQUARE STRAIGHT STEEL POLE	LED AREA LIGHT FIXTURE, 4000K, TYPE T4M DISTRIBUTION, BLACK FINISH, FUSED, 7-PIN RECEPTACLE. EC TO PROVIDE PHOTOCELL FOR DUSK-TIL-DAWN OPERATION. MOUNTED ON A SQUARE, STRAIGHT, STEEL POLE WITH BLACK FINISH.
C	LED 4000K 12,040 LUMENS TYPE T5W DISTRIBUTION	102W	102W	120/277	LITHONIA DSXI DSXI LED-P3-40K-T5W-MVOLT-SPA-PER7-HS-DF-DBLXD LITHONIA #SSS 12-6 4C-DM19AS-UL-DBLXD	PRISMATIC GLASS REFRACTOR	POLE MOUNTED WITH 15'-0" OVERALL MOUNTING HEIGHT 12'-6"SQUARE STRAIGHT STEEL POLE	LED AREA LIGHT FIXTURE, 4000K, TYPE T5W DISTRIBUTION, BLACK FINISH, FUSED, 7-PIN RECEPTACLE. EC TO PROVIDE PHOTOCELL FOR DUSK-TIL-DAWN OPERATION. MOUNTED ON A SQUARE, STRAIGHT, STEEL POLE WITH BLACK FINISH.

PANEL SCHEDULE FOR MILBANK PANEL "A"

MOUNTING: SURFACE	LOCATION:	SOUTHEAST CORNER OF LOT			
BUS RATING: 100A	KWC: 15.48	AMPS CONN.: 64.50	PHASE A KWC: 7.83		
100/2 MAIN CIRCUIT BREAKER	KWD: 13.87	AMPS DEM.: 57.77	PHASE B KWC: 7.65		
VOLTAGE: 240V-1ph-3W	A.I.C.: 10,000				
REMARKS: NEMA 3R, SERVICE ENTRANCE RATED, LOCKABLE COVER, INTEGRAL PANELBOARD IN MILBANK SERVICE PEDESTAL					

NOTES	CKT.	DESCRIPTION	KW CONNECTED LTG.	KW CONNECTED REC.	C/B	PH.	C/B	KW CONNECTED REC.	KW CONNECTED LTG.	DESCRIPTION	CKT	NOTES
RCBO	1	EV CAR CHARGER CT4000		3.45	32/2	A	20/2		0.38	PARKING LOT LIGHTING-SOUTH	2	
	3			3.45		B			0.38		4	
RCBO	5	EV CAR CHARGER CT4000		3.45	32/2	A	20/2		0.38	PARKING LOT LIGHTING-NORTH	6	
	7			3.45		B			0.38		8	
	9	SPARE			20/1	A	20/1	0.18		RECEPTACLE	10	
	11	SPARE			20/1	B	20/1			SPARE	12	
TOTALS			0.00	13.80				0.18	1.50	TOTALS		

RCBO = RESIDUAL CURRENT CIRCUIT BREAKER WITH OVERCURRENT PROTECTION. TYPE B, 30mA TRIP CURRENT

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(330) 836-6661

FRONT STREET SUMMIT DD PARKING LOT EXPANSION

ELECTRICAL SYMBOLS, LEGENDS, SCHEDULES, & SPECIFICATIONS

CITY OF CUYAHOGA FALLS

DWG FILE: F:\FRONT STREET\DD PWORK\BASE-FRONT DESIGN
DRAWN BY: CSP
DATE: 02/10/2021
DESIGNED BY: CSP
REVISION: DATE:
REVISION: DATE:

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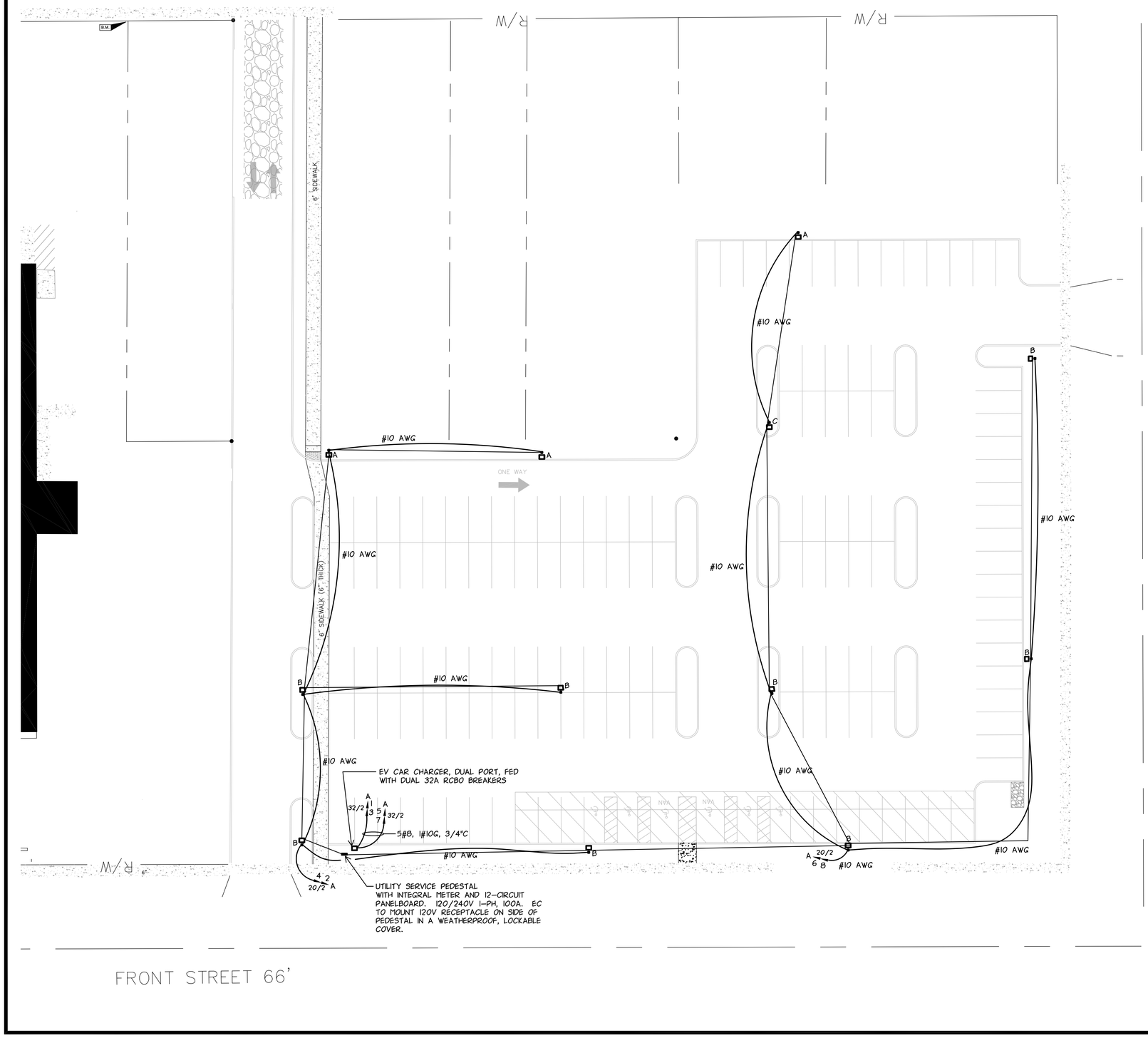

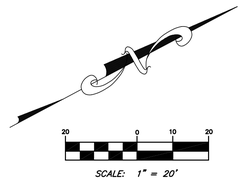

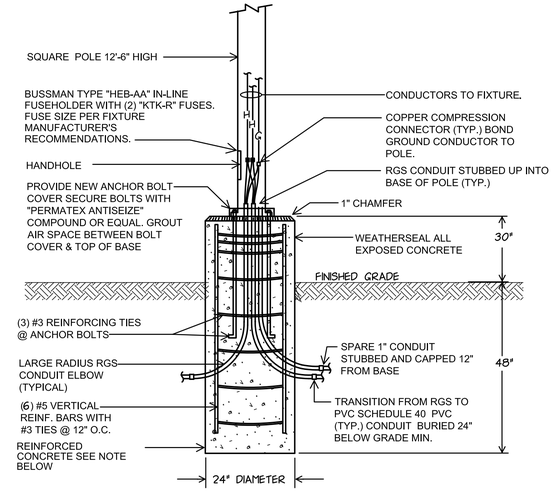

SITE LIGHTING POLE BASE DETAIL

SCALE: NONE

STATE OF OHIO
CHARLES S. PARSONS
E-72649
REGISTERED
PROFESSIONAL ENGINEER
1/22/21

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
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FAIRLAWN, OHIO 44333
(330) 836-6661

FRONT STREET SUMMIT DD PARKING LOT EXPANSION

LIGHTING AND POWER PLAN

CITY OF CUYAHOGA FALLS

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DESIGNED BY: CSP
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REVISION: DATE:

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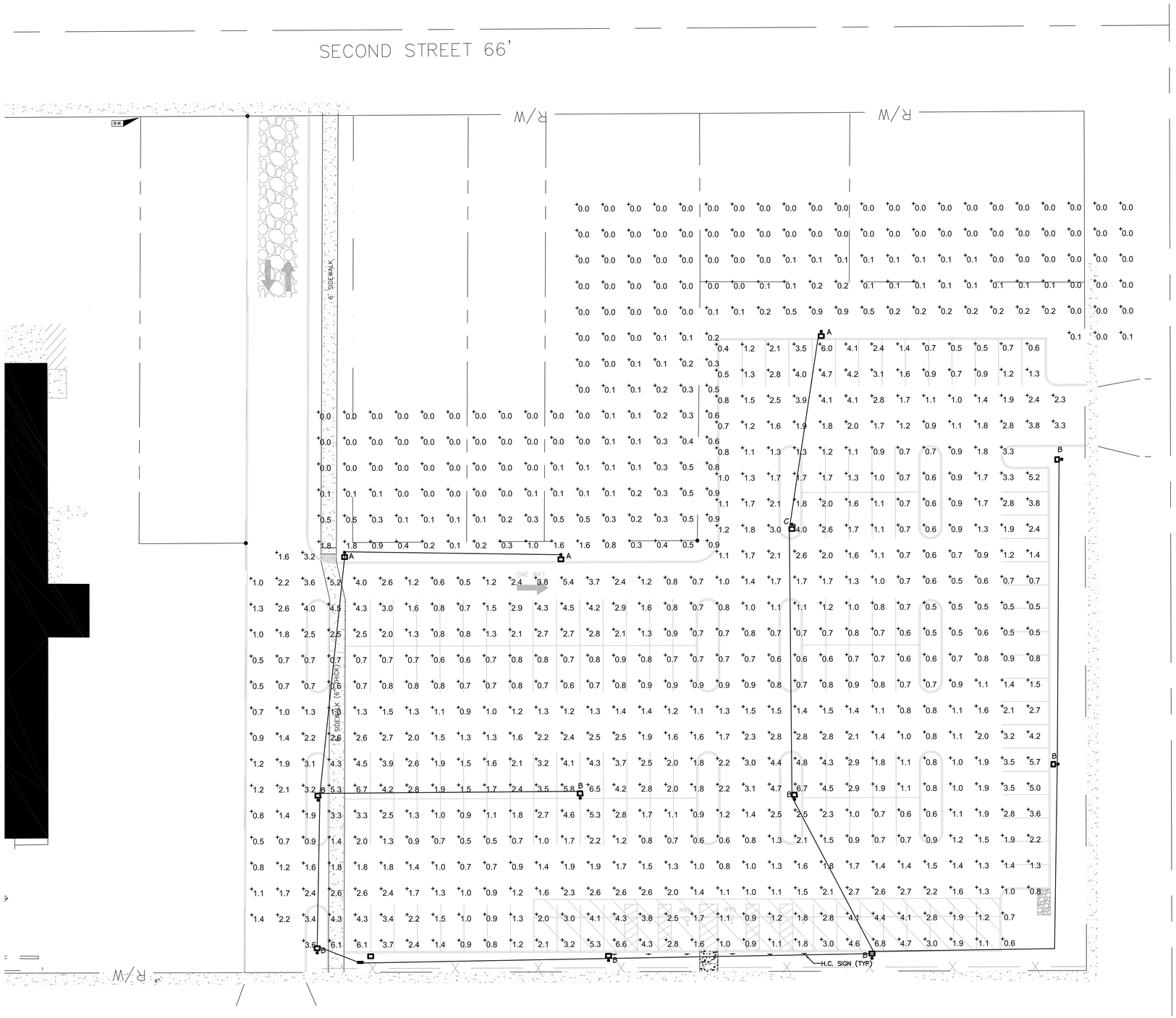

PHOTOMETRIC CALCULATIONS

PARKING LOT ZONE

AVERAGE FOOTCANDLES	1.8 FC
MAXIMUM FOOTCANDLES	6.8 FC
MINIMUM FOOTCANDLES	0.5 FC
MAX/MIN RATIO	13.6 : 1
AVG/MIN RATIO	3.6 : 1

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SCALE: 1" = 20'

STATE OF OHIO
CHARLES S. PARSONS
E-72549
REGISTERED PROFESSIONAL ENGINEER
1/22/21

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FRONT STREET SUMMIT DD PARKING LOT EXPANSION

LIGHTING PHOTOMETRIC PLAN

CITY OF CUYAHOGA FALLS

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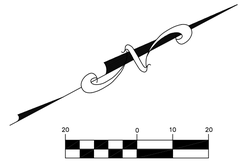

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SECTION 16010 - ELECTRICAL GENERAL PROVISIONS

1. The provisions of the Instructions to Bidders, General Conditions, Supplementary Conditions, Alternates, Addendas and Division 1 are a part of this specification. Electrical, Architectural, Mechanical and all other drawings as well as the specifications for all the divisions are a part of the contract documents. All revisions to the drawings and specifications up to the bid due date are a binding part of the contract.

2. Visit the site of the work and become familiar with the conditions affecting the installation. Submission of a proposal shall presuppose knowledge of such conditions and no additional compensation shall be allowed where extra labor or materials are required because of ignorance of these conditions.

3. Discrepancies between electrical, mechanical and architectural, contract drawings, or specifications shall be brought to the attention of the Owner prior to final bid submittal.

4. Definitions:

   A.) "Contractor" as used within the context of the electrical contract documents shall explicitly refer to the "electrical contractor".

   B.) The term "furnish" shall mean to supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar operations.

   C.) The term "install" shall mean work which includes the actual unloading, unpacking, assembly, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

   D.) The term "provide" shall mean to furnish and install, complete and ready for the intended use.

5. Include all labor, material, equipment, services and permits necessary for the proper completion of all electrical work shown. Items omitted, but necessary, to make the electrical system complete and workable shall be understood to form part of the work. Contractor's bid is assumed to include any premium time costs required to complete work.

6. It is the purpose of the electrical drawings to indicate the approximate location of all equipment, outlets, etc. Ascertain exact locations and arrange work accordingly. The right is reserved to effect reasonable changes in the location of outlets up to the time of roughing-in, without additional cost to the owner.

7. Secure and pay for all permits and inspections required for the electrical work.

8. Work shall be installed in accordance with all applicable provisions of local and state (OBC - Ohio Building Code) codes, as well as the National Electrical Code (NEC), as interpreted by the local Authority Having Jurisdiction (AHJ). No extra compensation will be allowed for any changes necessary for code compliance. Contractor shall follow NECA standards of installation as a minimum.

9. Consult the drawings, product data and shop drawings covering the work for various other trades, the field layouts of the contractors for the trade and make adjustments accordingly in laying out the electrical work. Where electrical requirements for other trades varies from what is indicated on the drawings the contractor shall notify the Architect and Engineer immediately and suspend all work associated with the variation until a determination is made by the Architect and Engineer.

10. Contractor shall guarantee all workmanship and materials, and the successful operation of all equipment and apparatus installed by him for a period of one year after final acceptance of the entire work by the Owner, and shall guarantee to repair or replace at his own expense any part of the apparatus which may show to be defective during that time provided such defect is, in the opinion of the owner, due to imperfect material or workmanship and not to carelessness or improper use.

11. Authorized representatives of the Owner shall have access to and privilege of inspecting all work and materials as work progresses. These representatives shall have authority to approve or reject work or materials, using drawings, specifications, codes and good engineering practices as the basis for approval or rejection.

12. The existing electrical and telephone service, and all existing communication systems within the building shall be maintained throughout the construction period. Any power shutdowns that may be required shall be scheduled through the Owner and shall be done at a time as directed by the Owner. No additional compensation shall be allowed for these shutdown periods even though premium-time work may be required. Provide temporary power to equipment or systems that cannot be shutdown, as determined by Owner.

13. Provide a minimum of one week's notice to the Owner before any power shutdown is scheduled.

14. Bids shall be based upon the specified products or listed alternative equals. The drawings and specifications are based on the products specified by type, model and size and thus establish minimum qualities which substitutes must meet to qualify for review. Where only one make is named, it shall be provided. Verbal requests or approvals shall not be binding on the Architect, Engineer or Owner. Should the contractor propose to furnish materials and equipment other than those specified, he shall submit a written request for substitutions to the Architect at the bid opening. Indicate any additions or deductions to the contract price on the bid form.

15. Equipment and materials used on this project shall be new and UL. listed and labeled for the application.

16. Prepare PDF set of shop drawings and product data for lighting fixtures, panelboards, distribution equipment, and all other specified systems and components. The submittals will be reviewed only for general compliance and not for dimensions, quantities, etc. The submittals that are returned shall be used for procurement. The responsibility of correct procurement remains solely with the contractor.

17. The submittal review shall not relieve the contractor of responsibility for errors or omissions and deviations from the contract requirements. If the submittal shows variations from the requirements of the contract documents for any reason, the contractor shall make mention of such variation in his letter of transmittal. The contractor shall note in red on the submittal any change in design or dimension on the items submitted including changes made by the manufacturer which may differ from catalog information. Where contents of submittal literature include data not pertinent to the submittal, clearly indicate which portion of content is being submitted for review. Where additional installation drawings, wiring diagrams or other drawings are specified as a part of the submittal, they shall be submitted at the same time with shop drawings and product data. Partial submittals and submittals not stamped with contractor approval are not acceptable, and will be returned for reprocessing.

18. The contractor shall keep one complete set of the contract working drawings on the project site on which he shall record any deviations or changes from such contract drawings made during construction. After the project is completed, record sets of drawings shall be delivered to the Architect in good condition, as a permanent record of the installation as constructed.

19. Provide nameplates on panelboards, distribution equipment, safety switches, motor starters, junction boxes, and control devices. Unless otherwise indicated on the drawings, lettering shall include the name or designation of equipment, horsepower, voltage rating and service designation. Nameplates shall be laminated phenolic with a black surface and white core. Identification with a dymo type instrument is not permissible. The inside cover of all receptacle outlet plates shall be permanently marked to indicate the panel and circuit number of the outlet. The inside cover of all blank plates for junction boxes installed shall be permanently marked to indicate the system. Identification of branch circuits shall be typewritten on directory cards furnished with all panels and placed in the card holder on the door. Provide new typewritten directory cards with updated schedules for all existing panels with new or modified circuits.

20. After installation, test for grounds, short circuits and proper function of each system and related wiring. Faults in the installation shall be corrected.

21. Insulation resistance tests shall be made on the electrical system with an approved megohmmeter.

22. A ground continuity test shall be made on the grounding system shown to be installed on the drawings. Where an existing service or panels are being reused, contractor shall verify proper grounding of service, panels, and separately derived systems and correct any deficiencies in the grounding electrode system and equipment grounding in order to comply with the NEC and above requirements.

23. At all times keep premises in neat and orderly condition cleaned on a daily basis with all debris being removed from the site daily. Follow explicitly any instructions of the owner's representative. After all tests and adjustments have been completed, clean all equipment leaving everything in working order at the completion of this work. Clean lighting fixtures, outlet box plates, panel and cabinet interiors and exteriors, etc., of dirt, dust, debris and paint, after all other trades have completed their work.

24. Demonstrate to the Owner's satisfaction the proper operation of each of the systems comprising this contract before final payment.

25. If required loads shall be adjusted on panels, distribution panels, switchboards, etc. So that loading on each phase is within 10% of each other.

26. All 120 volt single phase 15 and 20 amp receptacles used by workmen shall be protected by a GFCI. All work shall be done per OSHA requirements.

27. Do all cutting and patching in existing construction as necessary for installation of this work. Have cutting done by skilled mechanics as carefully as possible and with as little damage as possible.

SECTION 16050 - BASIC MATERIAL AND METHODS

1. All boxes and conduit shall be rigidly supported from the building structure independent of the conduit system. All boxes shall be 4" square boxes minimum with raised covers suitable for the wall material.

2. Raceways:

   A.) Conduit shall be schedule 40 pvc minimum. Conduits shall be 3/4" trade size, minimum, unless otherwise noted on the drawings or within these specifications.

   B.) Conduit connections to motors shall be flexible metal conduit "seal-tite" type "UA" as manufactured by the American Brass company or equivalent and shall be of the same size as the feeder conduit.

   C.) Conduits passing from interior of the building to exterior of the building shall be filled with a UL approved material to prevent circulation of warm air to the exterior raceway per NEC section 300.7(a).

3. Wiring Devices:

   A.) Ground fault circuit interrupter duplex receptacles where indicated on the drawings or where required by code, shall have an integral ground fault protector for personnel protection (5ma) and shall be 20A, 125V, 2 pole, 3 wire grounding: Hubbell #GFR5352. Ground fault receptacles shall not be thru-wired. Provide individual duplex receptacles as shown on the drawings.

   B.) Wiring devices (switches, receptacles, etc.) Shall be BLACK unless otherwise indicated. Verify color with the Architect.

   C.) The following are equivalent wiring devices:

1. Receptacles: #5362 series manufactured by Pass and Seymour or Leviton.

2. Wire and cable for branch circuits and for feeders shall be 600 volt, type THHN/THWN copper only, unless otherwise indicated on the drawings. Minimum size for power and lighting branch circuits shall be #12.

3. Safety switches shall be NEMA 4X heavy duty fusible or nonfusible type as indicated on the drawings, and shall be suitable for the voltage and current ratings as shown on the drawings. They shall contain an external pad-lockable operating handle..

4. Disconnect switches and motor starters shall be manufactured by Square D, General Electric, Siemens, Cutler Hammer, or Allen Bradley.

5. Raceway Installation:
   5.1. CONDUITS SHALL BE BURIED AS REQUIRED BY N.E.C. FOR THE CONDITIONS INDICATED. ALL CONDUITS ROUTED UNDER DRIVEWAYS SHALL BE ENCASED IN CONCRETE, MINIMUM 4" SURROUND.

6. Wire and cable installation:

   A.) Pull wire and cables into conduit using ideal industries "yellow 190", or equivalent.

   B.) Color code wire and cable for circuits as called for in the national electrical code. Color coding of feeders shall be by means of colored tape at terminals and all points of access including junction boxes. Color code as follows:

	208/120V
a. Phase A	black
b. Phase B	red
c. Phase C	blue
d. Neutral	white
e. Ground	green

12. Wiring device installation:

   A.) Adjacent devices shall be mounted in ganged boxes with common cover plates.

   B.) Verify mounting heights and locations with the Architect before rough-in. Refer to details and interior wall elevations shown on the Architectural drawings.

   C.) All receptacles shall be mounted with the ground opening above the phase and neutral openings.

   D.) All devices shall be secured with more than a single screw.

SECTION 16400 - SERVICE AND DISTRIBUTION

1. Ground all electrical system conduits, panels and other exposed non-current carrying metal parts of electrical equipment in accordance with all provisions of the national electrical code, state building code and local or regional codes.

2. Grounding of the electrical system shall be by means of an insulated grounding conductor installed with feeder and branch circuit conductors in all conduits. Grounding conductors shall be sized in accordance with NEC article 250. Where conductors are increased in size due to voltage drop the ground conductor size shall also be proportionally increased.

3. System neutral conductors shall be grounded at the source. Neutral conductors shall not be used for equipment grounding.

4. Furnish and install commercial branch circuit breaker panelboards equipped with circuit breakers, with frame and trip ratings listed on the drawings. Circuit breakers shall be thermal-magnetic, molded case bolt-on type. All current carrying parts of the bus structure shall be tin-plated aluminum. Each panelboard shall contain a grounding bus.

5. Each panelboard, as a complete unit, shall have a minimum symmetrical short circuit current rating of 10,000 amperes for 240 volt rated panels or as noted on the panel schedule.

6. Panelboards shall be as manufactured by Square D type NQOD, or equal by Siemens, General Electric or Cutler Hammer.

7. Panels shall be mounted so that top of the cabinet is at 6'-0" above floor. A glazed directory frame shall be provided inside each panel door and shall be of sufficient size to give a complete description of each circuit. Typed directory cards shall be provided listing each circuit served after Owner's room numbers are verified.

8. Branch circuit Panelboards shall be RATED NEMA 4X.

9. The branch circuit numbers used on the drawings shall be applied for the construction. However, at the completion of the work, circuit number adjustments shall be made as required to provide balanced phase loading on each panelboard.

10. Electrical equipment such as panelboards shall be provided with an orange "warning" label to warn qualified service personnel of potential electric arc flash hazards. The label shall be located in a clearly visible location on the equipment. The label shall indicate the category level and required personal protective equipment required (PPE) to wear and the available incident energy of an arc fault at the equipment at the required working distance. Provide a red "danger" label with the same information for all equipment with an incident energy equal to or greater than 40 cal/cm2 at the required working distance.

FRONT STREET SUMMIT DD PARKING LOT EXPANSION

ELECTRICAL SPECIFICATIONS

CITY OF CUYAHOGA FALLS

DWG FILE: F:\FRONT STREET\3D DWG\BASE-FRONT DESIGN
DRAWN BY: CSP
DATE: 02/10/2021
DESIGNED BY: CSP
REVISIONS: DATE:
REVISIONS: DATE:

E-104

SHEET 17 OF 17