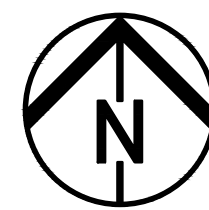
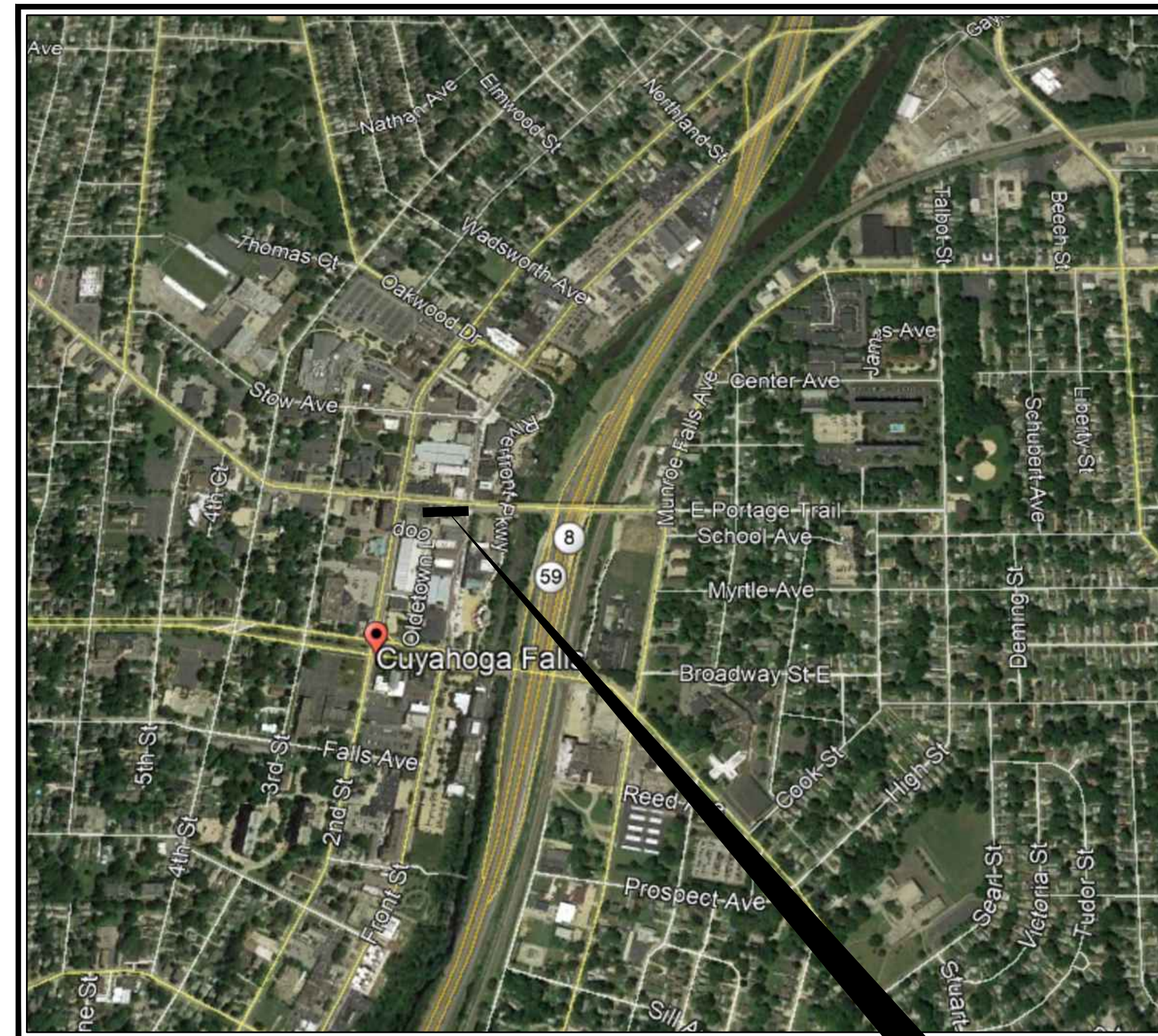


# City of Cuyahoga Falls FRONT STREET CORNER PLAZA

SUMMIT COUNTY, OHIO  
City of Cuyahoga Falls  
ISSUED: 2019-11-09

## SITE PLAN LEGEND

EXISTING	PROPOSED	
		CENTERLINE/BASELINE CONSTRUCTION
		PROPERTY LINE
		RIGHT OF WAY
		EASEMENT
		TEMPORARY RIGHT OF WAY
		SWALE
		CONTOUR
		STORM SEWER
		SANITARY SEWER
		WATER LINE
		WATER SERVICE
		GAS LINE
		ELECTRIC LINE, UNDERGROUND
		TELEPHONE LINE, UNDERGROUND
		FIBER OPTIC LINE, UNDERGROUND
		CABLE LINE, UNDERGROUND
		CATCH BASIN, MANHOLE
		MANHOLE ADJUSTED TO GRADE
		HYDRANT, HYDRANT ASSEMBLY
		VALVE, WV=WATER VALVE GV=GAS VALVE
		METER, E=ELECTRIC, G=GAS, W=WATER
		ELECTRIC CABINET, PULL BOX, PEDESTAL, MANHOLE
		TELEPHONE MANHOLE, UTILITY MARKER
		POWER POLE, TELEPHONE POLE, COMBINATION POLE, LIGHT POLE
		IRON PIN/PIPE FOUND, IRON PIN SET
		MONUMENT BOX
		SIGN
		MAILBOX
		FLAG POLE, DECORATIVE/YARD LIGHT
		TREE, SHRUB LINE, TREE REMOVED, TREE LIMBED AND ROOT PRUNED
		BASEMENT ELEVATION



LOCATION MAP

PROJECT LOCATION

2180 FRONT STREET,  
CUYAHOGA FALLS

## INDEX OF DRAWINGS

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PLANS PREPARED AND RECOMMENDED BY:



REVISED:

SET NO. \_\_\_\_\_

## 2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THESE PLAN BID DOCUMENTS SHALL GOVERN THIS IMPROVEMENT. FOR PURPOSES OF THIS PLAN, REFERENCES TO DIRECTOR OR ENGINEER SHALL BE CONSTRUED TO MEAN THE CITY ENGINEER AND/OR HIS REPRESENTATIVES.



Know what's below.  
Call before you dig.

PROJ. NUMBER	19-00316-010	TITLE PAGE	SHEET
DESIGNED BY:	RB		1 of 12
DRAWN BY:	RB, KEH		
FILE NO.	ZTITLE 19-00316-010.dwg		

ALL ITEM NUMBERS REFER TO THE 2019 STATE OF OHIO, DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. ALL EQUIPMENT, MATERIAL AND WORKMANSHIP SHALL BE PERFORMED ACCORDING TO THESE SPECIFICATIONS AND THE REFERENCED OHIO DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS NOTED ON THE TITLE SHEET.

**GENERAL**

**GENERAL MATERIAL STORAGE/EQUIPMENT STORAGE**

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE APPROPRIATE EQUIPMENT AND MATERIAL STORAGE AREA TO SUIT HIS NEEDS.

**MATERIAL TESTING AND PERMITS**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ALL MATERIAL TESTING. MATERIAL TESTING IS REQUIRED FOR ASPHALT, CONCRETE, AND AGGREGATES FOR TRENCH BEDDING AND BACKFILL.

**UNDERGROUND UTILITIES**

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.6 ORC. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS IN THE FIELD PRIOR TO BEGINNING WORK. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES ASSOCIATED WITH WORK. UTILITIES SHALL BE REPAIRED TO SATISFACTION OF THE UTILITY OWNER AND/OR OPERATING AUTHORITY AT NO ADDITIONAL COST.

**UTILITY OWNERSHIP**

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THE PROJECT:

CITY OF CUYAHOGA FALLS ENGINEERING DEPARTMENT 2310 SECOND ST. CUYAHOGA FALLS, OH 44221 (330) 971-8180 ATTN: TONY DEMASI, P.E.	COUNTY OF SUMMIT DEPT. OF ENVIRONMENTAL SERVICES 1180 S. MAIN ST. #201 AKRON, OH 44301 (330) 926-2400 ATTN: MIKE WEANT
SUPERINTENDENT CUYAHOGA FALLS ELECTRICAL DEPARTMENT 330-971-8036 ATTN: ROD TROXELL	AT&T 50 W. BOWERY ST., 6TH. FLOOR AKRON, OH 44308 (330) 384-3048 ATTN: JOHN BOKISA
FIRST ENERGY 1910 W MARKET ST, BLDG 1 AKRON, OH 44313 (330) 436-4055 ATTN: DAVID MILLER	SPECTRUM 530 S MAIN ST. AKRON, OH 44311 (330) 633-9203 EXT 7322 ATTN: CHRISTINE LEINHARDT
DOMINION EAST OHIO 320 SPRINGSIDE DRIVE, SUITE 320 AKRON, OH 44333 (330) 664-2409	SUNOCO PIPELINE CO. 999 HOME AVE. AKRON, OH 44310 (330) 704-7411

NO WORK SHALL BE PERFORMED OUTSIDE THE HOURS OF 7:00 P.M. TO 5:00 A.M. NO WORK SHALL BE PERMITTED UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE ENGINEER AND THE CITY OF CUYAHOGA FALLS.

**CONSTRUCTION SEQUENCE**

THE CONTRACTOR SHALL ENGAGE IN THE CONSTRUCTION OF THE PROJECT SUCH THAT ADEQUATE ACCESS TO ALL BUSINESSES IS MAINTAINED AT ALL TIMES. INCLUDE COSTS IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC. ONCE THE CONTRACTOR IS ENGAGED IN THE PROJECT, WORK SHALL BE CONTINUOUS USING FULL CREWS.

**DISCRETIONARY ALLOWANCE**

THE BID SCHEDULE INCLUDES A DISCRETIONARY ALLOWANCE FOR USE BY THE OWNER TO PAY FOR CHANGE ORDERS. THERE IS NO GUARANTEE THAT THE OWNER WILL UTILIZE ANY OR ALL OF THE DISCRETIONARY ALLOWANCE.

**DEMOLITION**

**REMOVAL OF DEBRIS AND SITE CLEANUP**

THE PROJECT SITE MUST BE KEPT FREE OF CONSTRUCTION DEBRIS, TRASH, PAPER AND OTHER WASTE ITEMS. COLLECT AND REMOVE THESE ITEMS AT THE END OR EACH WORK DAY. ALL DEMOLITION ITEMS SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER AS APART OF COST OF ITEM REMOVED, UNLESS STATED OTHERWISE.

**DUST NUISANCE ORIGINATION**

DUST PRODUCED FROM ANY OPERATIONS INSIDE OR OUTSIDE THE RIGHT-OF-WAY SHALL BE CONTROLLED BY THE CONTRACTOR IN ACCORDANCE WITH ITEM 616. WATER AND/OR CALCIUM CHLORIDE SHALL NOT BE APPLIED UNLESS ORDERED BY THE ENGINEER.

**PAVEMENT SWEEPING**

AS REQUIRED DURING THE COURSE OF EACH WORK DAY, THE CONTRACTOR SHALL SWEEP ALL PAVED AREAS AFFECTED BY THE DAY'S WORK. PAVEMENT SHALL BE SCRAPED AND SWEEPED TO REMOVE ALL DIRT, MUD AND DEBRIS. INCLUDE THE COST OF THIS WORK IN THE PRICE BID FOR THE EXCAVATION.

**CLEARING AND GRUBBING**

ALL TREES, STUMPS, ROOTS, SHRUBS AND DEBRIS REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR OFF SITE AT A LOCATION LICENSED TO ACCEPT SUCH MATERIAL. REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OR AS NOTED ON THE DRAWINGS SHALL BE PAID FOR UNDER THE LUMP SUM BID FOR ITEM 201. CLEARING AND GRUBBING. FOR TREES, REMOVAL INCLUDES THE ROOT MASS. NO ROOT MASS IS PERMITTED WITHIN THE FOOTPRINT OF ANY PAVEMENT (ASPHALT, CONCRETE, AGGREGATE).

**SAW CUTTING**

CONTRACTOR SHALL LAYOUT PAVEMENT SAW CUT AREAS PRIOR TO COMMENCEMENT OF WORK FOR APPROVAL BY OWNER'S REPRESENTATIVE. ALL SAW CUTTING IS TO BE PERFORMED WET. CONTRACTOR SHALL COLLECT SEDIMENT LADEN WATER CREATED BY SAW CUTTING OPERATIONS FOR SEDIMENT REMOVAL PRIOR TO DISCHARGING WATER FROM WORK AREA.

**PROTECTION AND RESTORATION OF PROPERTY**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL PUBLIC AND PRIVATE PROPERTY.
- THE CONTRACTOR IS REQUIRED TO PROTECT THE WORK ZONE AND STAGING AREAS AT ALL TIMES WITH TEMPORARY MINIMUM 72-INCH HIGH CHAIN LINK FENCE. FENCING SHALL BE SELF-SUPPORTING AND REMAIN PLUMB. ALL EQUIPMENT MATERIALS AND LABOR REQUIRED FOR CONSTRUCTION FENCING AND GATES SHALL BE PAID FOR UNDER THE LUMP SUM PRICE FOR MOBILIZATION. NO ADDITIONAL PAYMENT WILL BE MADE FOR FENCE OR GATES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE OR INJURY TO PROPERTY OF ANY CHARACTER, DURING THE EXECUTION OF THE WORK, RESULTING FROM ANY ACT, OMISSION, NEGLIGENCE, OR MISCONDUCT OF HIS MANNER OR METHOD OF EXECUTING THE WORK, OR AT ANY TIME DUE TO DEFECTIVE WORK OR MATERIALS, AND SAID RESPONSIBILITY WILL NOT BE RELEASED UNTIL THE PROJECT SHALL HAVE BEEN COMPLETED AND ACCEPTED.
- WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY OCCURS TO PUBLIC OR PRIVATE PROPERTY BY OR ON ACCOUNT OF ANY ACT, OMISSION, NEGLIGENCE, OR MISCONDUCT IN THE EXECUTION OF THE WORK, OR IN CONSEQUENCE OF THE NON-EXECUTION THEREOF BY THE CONTRACTOR, HE SHALL RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE, BY REPAIRING, REBUILDING OR OTHERWISE RESTORING AS MAY BE DIRECTED, OR SHALL MAKE GOOD SUCH DAMAGE OR INJURY IN AN ACCEPTABLE MANNER.
- WHEN SIGNS AND SUPPORTS INTERFERE WITH CONSTRUCTION, THE CONTRACTOR SHALL REMOVE AND ERECT THEM IN A TEMPORARY LOCATION DURING CONSTRUCTION IN A MANNER SATISFACTORY TO AND AS DIRECTED BY THE ENGINEER. AFTER COMPLETION OF THE CONSTRUCTION AND BEFORE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL ERECT THE SIGNS AND SUPPORTS IN THEIR

ORIGINAL LOCATION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

**REMOVAL OF EXISTING STRUCTURES**

- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING PIPES, YARD DRAINS, LANDSCAPE TIMBERS, AND OTHER ITEMS WITHIN THE LIMITS OF WORK THAT WILL BE ABANDONED OR OTHERWISE NOT USED AS PART OF PROJECT IMPROVEMENTS. ABANDONING PIPES IN PLACE OR FILLING THEM WITH GROUT IS NOT ACCEPTABLE, UNLESS AUTHORIZED BY THE ENGINEER. THE PROPERTY OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL LANDSCAPE, POLES, AND PAVEMENT ITEMS REMOVED.
- ALL ITEMS REMOVED SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR STRUCTURES REMOVED, EXCEPT FOR REMOVAL ITEMS NOTED SEPARATELY.
- ALL ITEMS NOTED TO BE SALVAGED TO BE RETURNED TO THE CITY OF CUYAHOGA FALLS.

**SIGNS AND POSTS REMOVED**

THE CITY OF CUYAHOGA FALLS SHALL HAVE FIRST REFUSAL OF ALL SIGNS AND POSTS REMOVED.

**LAYOUT**

- CONSTRUCTION NOTES AND TYPICALS MAY APPEAR ONLY ONCE ON THE DRAWING, BUT APPLY TO ALL SIMILAR CONDITIONS.
- ALL ANGLES ARE 90° UNLESS OTHERWISE NOTED.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS ON THE GROUND AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- THE CONTRACTOR SHALL REPAIR OR REPLACE ALL PAVEMENT AND UTILITIES DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR TO LAYOUT ALL ITEMS FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION

**GRADING**

- PRIOR TO CONSTRUCTION, PLACE EROSION CONTROL MEASURES AS SHOWN ON THE SITE STORMWATER POLLUTION PREVENTION PLAN.
- PRIOR TO EXCAVATION AND EARTHWORK OPERATIONS, THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND PROPOSED GRADES AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE. FIELD VERIFY LOCATIONS OF ALL BURIED UTILITIES AND DEPTHS AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE.
- EXISTING TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE IN A LOCATION APPROVED BY THE OWNER. THE AREA TO BE STRIPPED SHALL INCLUDE THE AREA WHERE THE PROPOSED WORK WILL BE LOCATED. UPON COMPLETION OF THE WORK, THE STOCKPILED TOPSOIL WILL BE EVENLY DISTRIBUTED OVER THE DISTURBED WORK AREA IN A UNIFORM THICKNESS OF AT LEAST 6 (SIX) INCHES. STOCKPILED TOPSOIL IN EXCESS OF THE AMOUNT NEEDED FOR THE ABOVE NOTED WORK WILL BE WASTED AT A DISPOSAL AREA AS DETERMINED BY THE CITY OF CUYAHOGA FALLS.
- EXCESS EXCAVATION AND TOPSOIL WILL BE STOCKPILED AT A SUITABLE LOCATION OR AT A SITE APPROVED BY THE CITY OF CUYAHOGA FALLS AND ENGINEER. A SILT FENCE IS REQUIRED FOR SEDIMENT CONTROL. SEEDING AND MULCHING ARE REQUIRED. THE STOCKPILES SHALL BE GRADED SMOOTH AND COMPACTED TO 90% DENSITY.
- MAINTAIN UNIFORM AND POSITIVE SLOPES FOR ALL REGRADED SURFACES.
- CONTRACTOR TO MEET AND MATCH PROPOSED SIDEWALK AND STREET WITH ADJOINING EXISTING GRADES.

**LANDSCAPE**

**GENERAL PLANTING**

- IN CASE OF DISCREPANCIES BETWEEN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE. IF IN QUESTIONS, CONTACT THE OWNERS REPRESENTATIVE BEFORE PLANTING OPERATIONS ARE TO PROCEED. FINAL PLACEMENT OF PLANT MATERIALS, ETC. SHALL BE APPROVED BY OWNER'S REPRESENTATIVE BEFORE PLANTING OPERATIONS ARE TO PROCEED.
- NO SUBSTITUTIONS OF PLANT MATERIAL WILL BE ALLOWED. IF PLANTS ARE UNAVAILABLE, THE CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE PRIOR TO BID DATE IN WRITING. ALL PLANTS SHALL BE INSPECTED AND TAGGED WITH PROJECT IDENTIFICATION AT NURSERY OR CONTRACTOR'S OPERATION PRIOR TO MOVING TO JOB SITE. PLANTS MAY ALSO BE INSPECTED AND APPROVED OR REJECTED ON THE JOB SITE.
- ALL PLANTS ARE TO MEET OR EXCEED AMERICAN STANDARDS FOR NURSERY STOCK, 2004 EDITION, AS SET FORTH BY AMERICAN ASSOCIATION OF NURSERYMEN.
- MAINTENANCE OF PLANT MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL PLANT MATERIALS ARE ACCEPTED BY OWNER. MAINTENANCE INCLUDES BUT IS NOT LIMITED TO WATERING, WEEDING, PEST CONTROL, AND OTHER ACTIONS AS REQUIRED TO MAINTAIN PLANT MATERIALS IN A HEALTHY CONDITION.
- ALL NEW LANDSCAPE PLANTINGS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FOLLOWING FINAL INSPECTION BY OWNER'S REPRESENTATIVE. AT END OF THIS PERIOD, PLANT MATERIAL DEEMED DEAD OR UNSATISFACTORY BY OWNERS REPRESENTATIVE SHALL BE REPLACED AT NO ADDITIONAL CHARGE BY THE CONTRACTOR.

**PLANTING BED PREPARATION**

- PRIOR TO ALL PLANTING, ROTOTILL ALL PLANTING BEDS TO PREPARE FOR PLANT INSTALLATION TO A MINIMUM 8 INCH DEPTH. COMPLETELY PULVERIZE SOILS TO REMOVE ALL CLODS AND CLUMPS TO ATTAIN NATURAL TEXTURE OF SOIL MATERIALS. ELIMINATE UNEVEN AREAS AND LOW SPOTS. MAINTAIN LINES, LEVELS, PROFILES, AND CONTOUR. MAKE CHANGES IN GRADE GRADUAL. BLEND SLOPES INTO LEVEL AREAS. REMOVE ALL DEBRIS, WEEDS, UNDESIRABLE PLANTS AND THEIR ROOTS FROM AREAS TO BE PLANTED. REMOVE ALL CONCRETE SLAG LARGER THAN 2" IN DIAMETER.
- AMEND ALL SOIL IN PLANTING BEDS BY PLACING A MINIMUM 4" DEPTH OF TOPSOIL TO FULL EXTENT OF THESE AREAS. TILL TOPSOIL INTO UPPER 8 INCHES BY DIGGING, SPADING OR ROTOTILLING. ORGANIC MATTER MAY BE SUBSTITUTED IF SUFFICIENT TOPSOIL IS NOT AVAILABLE.

**PLANTING INSTALLATION**

- PLANTING HOLES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANTING DETAILS.
- INSTALL 3-INCH DEPTH OF MULCH AROUND ALL TREE AND SHRUB BEDS AS INDICATED ON THE PLANTING DETAILS.
- ALL PLANT MATERIALS SHALL BE THOROUGHLY WATERED IN UPON COMPLETION OF PLANTING OPERATIONS. PLANTS THAT CANNOT BE INSTALL ON THE SAME DAY THEY ARE DELIVERED TO THE SITE SHALL BE MULCHED IN AND ADEQUATELY WATERED UNTIL PLANTED.

**PAVEMENT**

**PAVEMENT MIX DESIGN**

FOR PAVING ITEMS, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A DESIGN MIX FOR REVIEW AND APPROVAL PRIOR TO THE PRE-CONSTRUCTION MEETING. ALL MATERIALS USED MUST BE OBTAINED FROM A SOURCE APPROVED BY THE OHIO DEPARTMENT OF TRANSPORTATION.

**CONCRETE TESTING**

- ALL CONCRETE USED ON THE PROJECT SHALL BE TESTED. THIS INCLUDES CONCRETE FOR ROADS, CURB, DRIVEWAYS, THRUST BLOCKING, FILL INSIDE CATCH BASINS, AND FOR ANY OTHER PURPOSE ON THE PROJECT. A MIX DESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL, PRIOR TO BEGINNING WORK. A TICKET FOR EACH LOAD DELIVERED TO THE PROJECT SHALL BE PROVIDED TO THE FIELD REPRESENTATIVE. TICKET SHALL INCLUDE ALL INFORMATION REQUIRED IN ODOT 499.08. CONCRETE SHALL BE TESTED FOR AIR, SLUMP, AND COMPRESSIVE STRENGTH. EACH LOAD SHALL BE CHECKED FOR AIR AND SLUMP. FOUR (4) TEST SPECIMENS WILL BE MADE FROM EVERY THIRD TRUCK STARTING WITH THE FIRST TRUCK EACH DAY THAT CONCRETE IS DELIVERED TO THE JOBSITE AND/OR EACH TIME THE MIX IS CHANGED. TEST ONE CYLINDER AT 7 DAYS AND ONE AT 28 DAYS, TWO ARE SPARES. SUBMIT A COPY OF EACH REPORT TO THE ENGINEER IMMEDIATELY AFTER THE TEST IS CONDUCTED. ALL TEST REPORTS FOR THE MONTH MUST BE SUBMITTED BY THE TIME OF THE CONTRACTOR'S PAY REQUEST SUBMITTAL, OR THE SUBMITTAL WILL BE CONSIDERED INCOMPLETE AND WILL BE RETURNED TO THE CONTRACTOR.
- NOTE THAT FOR DRIVEWAYS, A CONCRETE BEAM SHALL ALSO BE MADE AND TESTED FOR EACH DAY'S POUR.

**STORM**

**STORM SEWER**

- THE LOCATIONS OF ONSITE STORM SEWER STRUCTURES AND UNDERGROUND LINES ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THEIR EXACT LOCATION, DEPTH & SLOPE PRIOR TO EARTHWORK ACTIVITIES, INCLUDING CCTVING ALL ON-SITE DRAIN LINES. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
- ALL STORM SEWER LENGTHS SHOWN ON THE DRAWINGS ARE HORIZONTAL DISTANCES MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
- BEDDING SHALL BE CLASS B PER ITEM 603.04 EXCEPT THAT SLAG AND CRUSHED CONCRETE IS NOT PERMITTED. BEDDING SHALL EXTEND FROM 6" BELOW THE BOTTOM OF PIPE TO THE SPRINGLINE (FOR CONCRETE PIPE) AND TO 12" ABOVE THE TOP OF PIPE (FOR POLYETHYLENE PIPE). BACKFILL SHALL BE TYPE 1 STRUCTURAL BACKFILL PER ITEM 703.11 WHERE STORM SEWER IS PLACED BELOW AND/OR BEHIND CURB. PAVEMENT AND/OR DRIVES, OR WHEN THE EDGE OF THE TRENCH IS WITHIN 3 FEET OF SUCH. BACKFILL SHALL BE SUITABLE NATIVE MATERIAL WHERE STORM SEWER IS PLACED BELOW ROADSIDE DITCHES.
- ROOF DRAINS, FOUNDATION DRAINS SHALL BE PVC, ASTM D-3034, SDR 35. BEDDING SHALL BE TYPE 2 PER ITEM 603.06 AND BACKFILL SHALL BE NATIVE MATERIAL COMPACTED PER ITEM 603.10, SECTION D.
- ALL BACKFILL IN TRENCHES SHALL BE PLACED IN 6" LIFTS AND COMPACTED USING MECHANICAL TAMPERS. COMPACTION RATES SHALL BE PER ITEM 603.11.
- STORM SEWER INSTALLATION SHALL INCLUDE: EXCAVATING FOR PIPE AND FOUNDATIONS FOR SAME, INCLUDING CLEARING AND GRUBBING AND THE REMOVAL OF ALL MATERIALS NECESSARY FOR PLACING THE PIPE EXCEPT REMOVALS LISTED SEPARATELY; FURNISHING AND PLACING OF BEDDING AND BACKFILL AS REQUIRED; PUMPING AND DEWATERING; SEALING OR BANDING ALL PIPE JOINTS WHERE REQUIRED; FURNISHING AND INSTALLING ALL NECESSARY PIPE BENDS AND BRANCHES OF A TYPE AT LEAST EQUAL TO THE CONDUIT OF WHICH THEY BECOME A PART; JOINING TO THE EXISTING AND PROPOSED APPURTENANCES AS REQUIRED; CORE DRILLING EXISTING STRUCTURES FOR CONNECTING TO NEW STORM SEWERS; AND PERFORMING LEAKAGE TESTS AS SPECIFIED.

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FRONT STREET CORNER  
PLAZA  
CITY OF CUYAHOGA FALLS



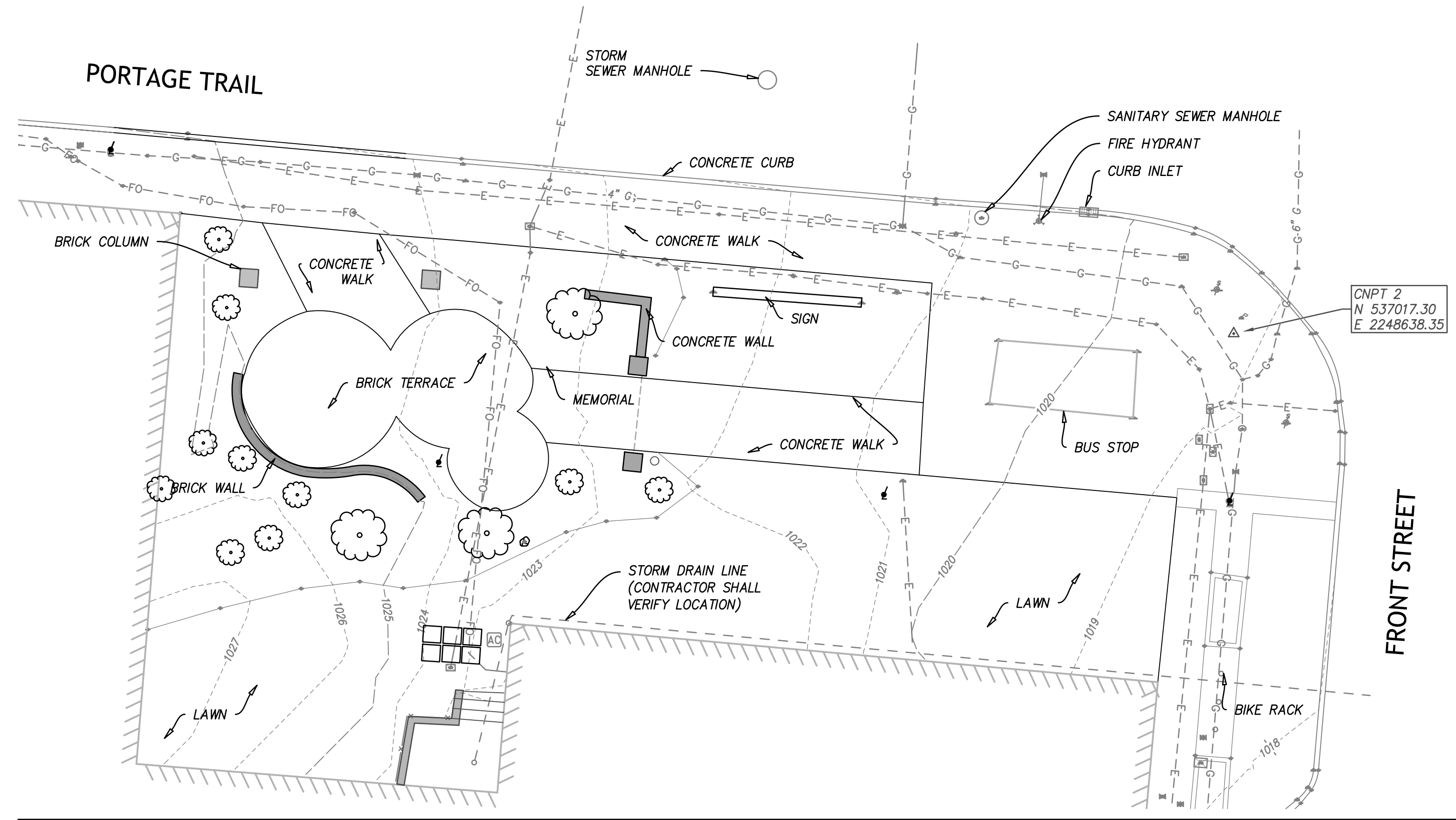
CITY OF  
**Cuyahoga Falls**



REVISIONS		
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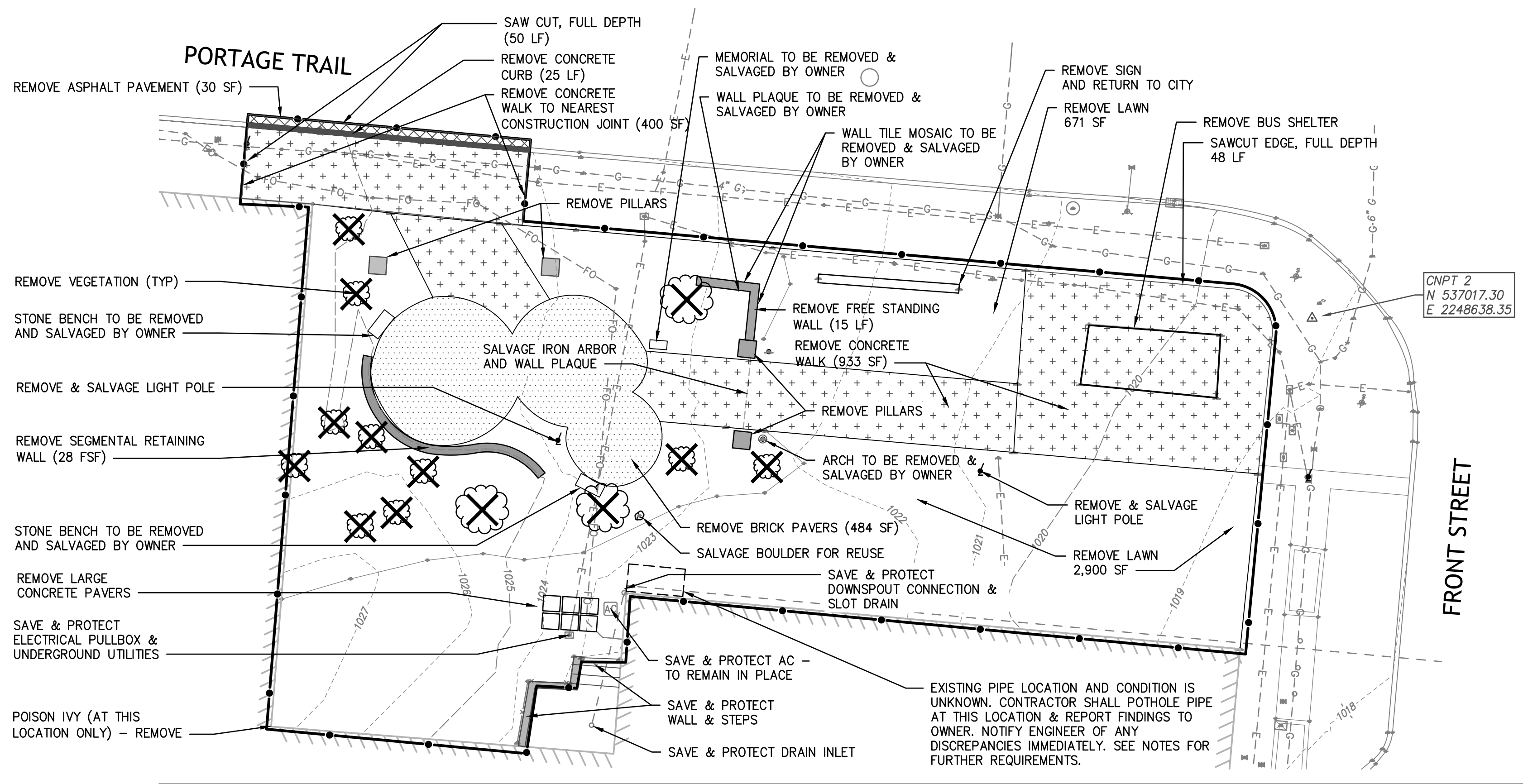
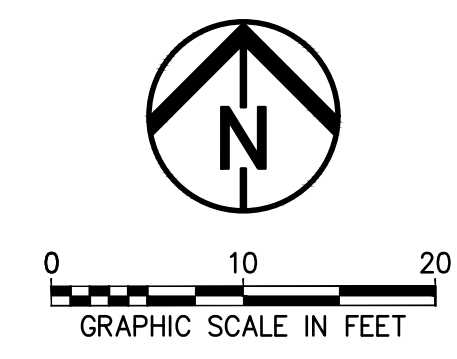
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DRAWN BY:	RB, KEH
CHECKED BY:	RB
DATE ISSUED:	2019-11-09

**GENERAL NOTES**

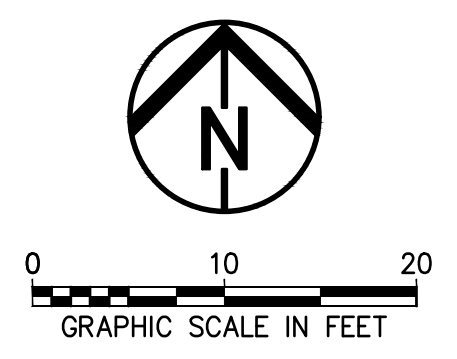


EXISTING CONDITIONS PLAN

- LEGEND**
- CONSTRUCTION LIMITS
  - ▬ EXISTING WALL OR PILLAR TO BE REMOVED
  - ▬ EXISTING CURB TO BE REMOVED
  - ⊕ EXISTING CONCRETE TO BE REMOVED
  - ⊘ EXISTING CONCRETE PAVERS TO BE REMOVED
  - ▨ EXISTING ASPHALT TO BE REMOVED
  - ▨ EXISTING BUILDING FACE



DEMOLITION PLAN



**FRONT STREET CORNER  
 PLAZA  
 CITY OF CUYAHOGA FALLS**



**CITY OF Cuyahoga Falls**



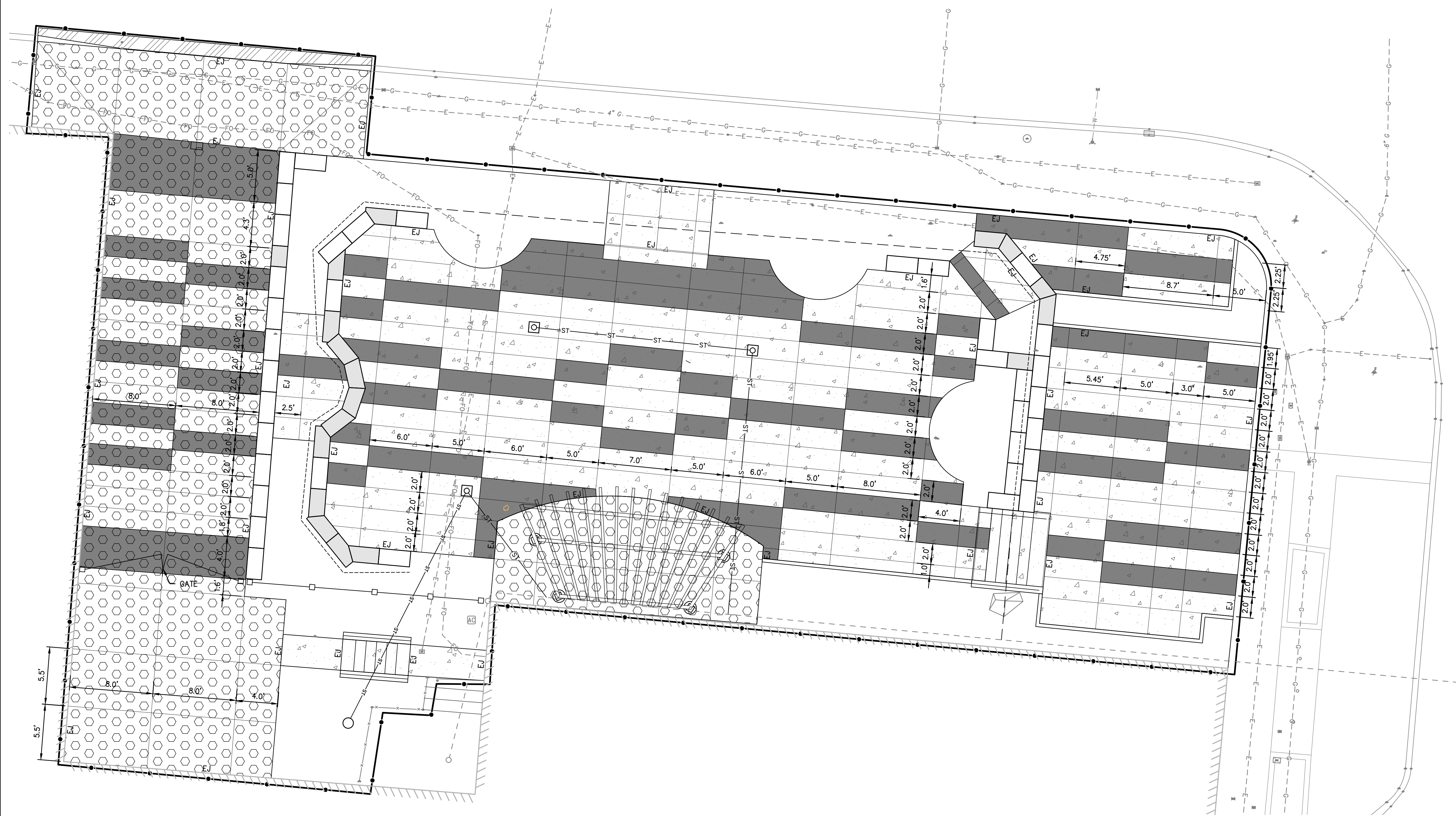
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**EXISTING CONDITIONS  
 AND DEMOLITION  
 PLANS**

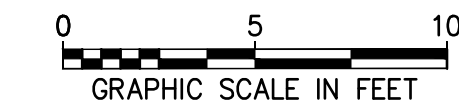
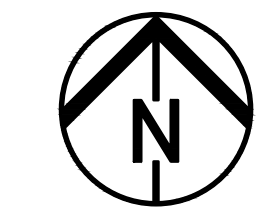
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**LEGEND**

- |  |                                      |  |  |
|--|--------------------------------------|--|--|
|  | CONCRETE PAVEMENT - STANDARD DUTY    |  | CONSTRUCTION LIMITS                      |
|  | CONCRETE PAVEMENT - HEAVY DUTY       |  | ACCESS GATE                              |
|  | CONCRETE PAVEMENT - COLOR BANDING    |  | PRIVACY FENCE                            |
|  | ASPHALT PAVEMENT - PER ODOT BP-3.1   |  | OVERHEAD LIGHTING - SEE ELECTRICAL SHEET |
|  | PRE-CAST STONE BLOCK                 |  | PERGOLA                                  |
|  | PRE-CAST STONE BLOCK - CUTS REQUIRED |  | FOOTING                                  |
|  | PRE-CAST STONE TABLE                 |  | STORM INLET & DRAIN LINE                 |
|  | SALVAGED BOULDER                     |  | PERFORATED UNDERDRAIN LINE               |
|  | SITE FURNITURE                       |  | SOLID UNDERDRAIN LINE                    |
|  | SITE FURNITURE - NOT IN CONTRACT     |  |  |

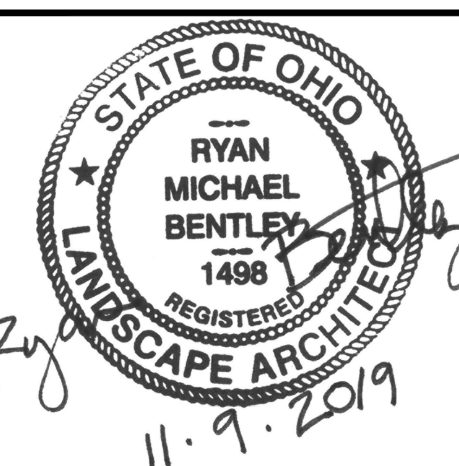


- NOTES:  
 1) CONTRACTOR SHALL SAW CUT SCORE JOINTS AS SHOWN.  
 2) OWNER SHALL WORK WITH CONTRACTOR TO DETERMINE COLOR BANDING USING ITEM SPEC. - CONCRETE STAINING.

**FRONT STREET CORNER  
 PLAZA  
 CITY OF CUYAHOGA FALLS**



CITY OF **Cuyahoga Falls**

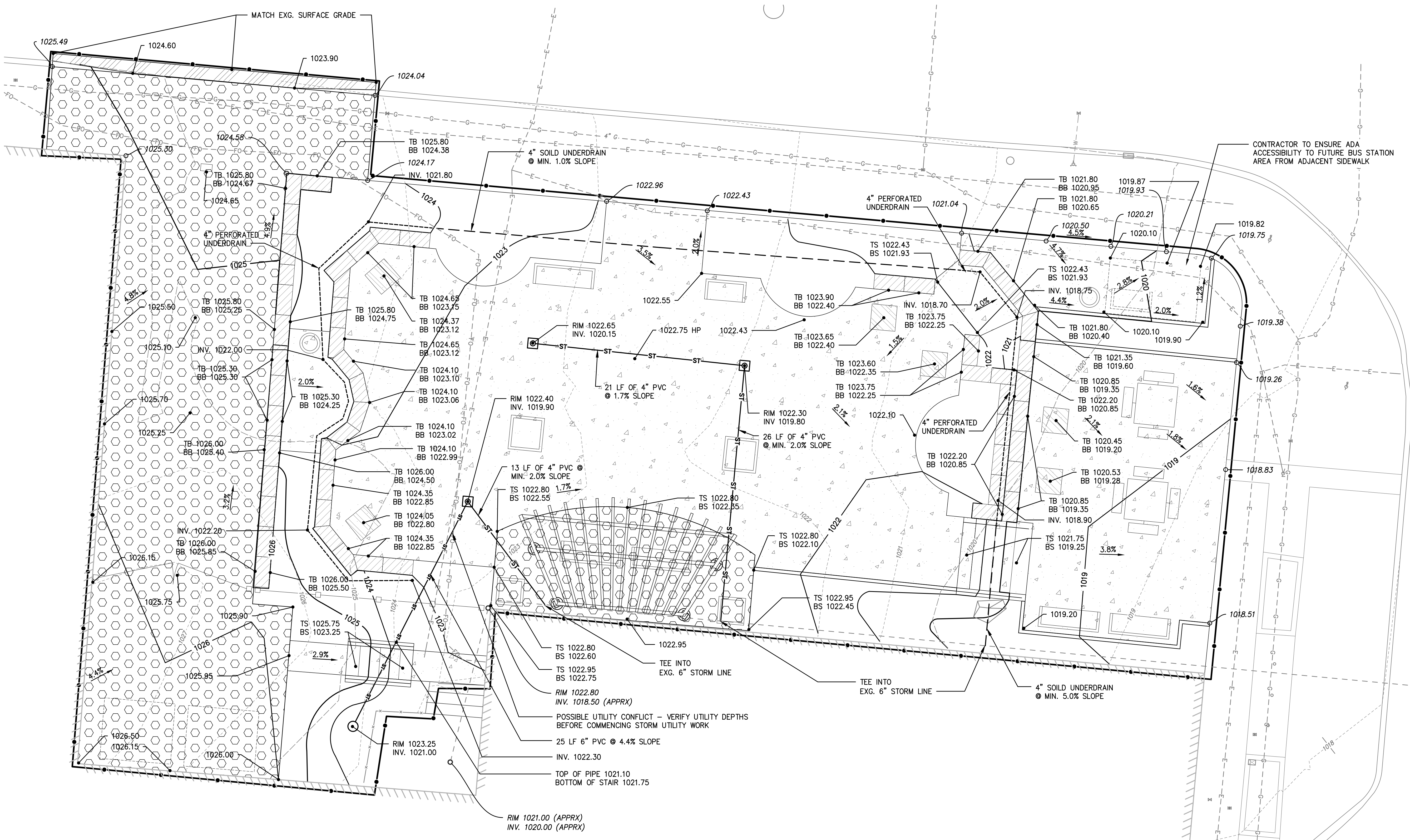


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**PLAZA BANDING PLAN**

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**FRONT STREET CORNER  
 PLAZA  
 CITY OF CUYAHOGA FALLS**



CITY OF  
**Cuyahoga Falls**



REVISIONS

NO.	DATE	DESCRIPTION

PROJECT NO.: 19-00316-010  
 DRAWN BY: RB, KEH  
 CHECKED BY: RB  
 DATE ISSUED: 2019-11-09

**GRADING AND  
 DRAINAGE PLANS**

E:\CUYAHOGA FALLS CITY OF 19-00316-010 FRONT STREET CORNER PLAZA GRADING AND DRAINAGE PLAN 19-00316-010 - 11.02.2019 2:28:41 PM

**STORMWATER POLLUTION PREVENTION PLAN NOTES**

- CONSTRUCT IN ACCORDANCE WITH THESE PLANS. THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) STANDARD CONSTRUCTION DRAWING DM-4.4 AND THE OHIO RAINWATER AND LAND DEVELOPMENT HANDBOOK (2006). THE IMPLEMENTATION OF SOIL EROSION AND SEDIMENT CONTROL SHALL ALSO CONFORM TO THE REQUIREMENTS OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) UNDER NPDES PERMIT #OHCO00004. IF CONFLICTS EXIST REGARDING THE SOIL AND SEDIMENT CONTROL PRACTICES, THE MORE RESTRICTIVE SHALL APPLY.
- STABILIZATION OF DISTURBED AREAS - DISTURBED AREAS SHALL HAVE SOIL STABILIZATION APPLIED WITHIN SEVEN (7) DAYS IF THEY ARE TO REMAIN DORMANT (UNDISTURBED) FOR MORE THAN FOURTEEN (14) DAYS. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. WHEN SEASONAL CONDITIONS PROHIBIT THE APPLICATION OF TEMPORARY OR PERMANENT SEEDING, NON-VEGETATIVE SOIL STABILIZATION PRACTICES SUCH AS MULCHING AND MATTING SHALL BE USED.
- INSTALL ALL EROSION/SEDIMENT CONTROL ITEMS BEFORE ANY CLEARING/GRUBBING OR EARTHWORK HAS STARTED.
- MULCHING SHALL BE AS SPECIFIED IN ODOT CMS ITEM 659 < 02920 > < T-908 >.
- TOPSOILING SHALL BE AS SPECIFIED IN ODOT CMS ITEM 659 < 02920 > < T-905 >.
- SILT FENCE AND/OR SILT SOCK SHALL BE AS DETAILED ON THE DRAWINGS AND AS SPECIFIED IN ITEM P-104 OF THE TECHNICAL SPECIFICATIONS.
- NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORMWATER RUNOFF.
- OFF-SITE VEHICLE TRACKING OF SEDIMENTS WILL BE MINIMIZED. ALL OFF-SITE TRACKING OF SEDIMENT SHALL BE CLEANED UP AS IT OCCURS.
- SEDIMENT TRAPS WILL BE USED FOR TEMPORARY EROSION CONTROL.
- OTHER EROSION CONTROL AND SEDIMENT CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.
- TRUCK WASHOUT AND DISCHARGE OF SURPLUS WASH WATER ON SITE IS PERMITTED EXCLUSIVELY IN THE DESIGNATED AREA.
- WINTERIZATION - ANY DISTURBED AREA THAT IS NOT GOING TO BE WORKED FOR 14 DAYS OR MORE MUST BE SEEDED AND MULCHED BY NOVEMBER 1 OR MUST HAVE A DORMANT SEEDING OR MULCH COVER APPLIED BETWEEN NOVEMBER 1 AND MARCH 1.
- TRENCH WATER MUST BE PUMPED THROUGH A SEDIMENT SETTLING FACILITY OR EQUALLY EFFECTIVE DEVICE PRIOR TO DISCHARGE FROM THE SITE.
- STAGING, STORAGE, FUELING AND VEHICLE PARKING ARE SHOWN ON THE SWPP PLAN. IF THE CONTRACTOR WANTS TO UTILIZE A DIFFERENT LOCATION FOR THESE FUNCTIONS, HE SHALL REVISE THE SWPP PLAN AND SUBMIT IT TO THE CITY. FOR APPROVAL.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL EROSION AND SEDIMENT CONTROL MEASURES.

**MAINTENANCE AND INSPECTION:**

PERMANENT RECORDS OF MAINTENANCE AND INSPECTION MUST BE MAINTAINED THROUGHOUT CONSTRUCTION A MINIMUM OF ONCE EVERY 7 DAYS AND AFTER STORM EVENTS GREATER THAN 0.5 INCH IN A 24 HOUR PERIOD. PROVIDE NAME OF INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION, CERTIFICATION OF COMPLIANCE AND CORRECTIVE MEASURES TAKEN.

**REPAIRS:**

ANY EROSION CONTROL MEASURES, STRUCTURES, DEVICES, OR RELATED ITEMS IN NEED OF REPAIR WILL BE MADE WITHIN 7 DAYS.

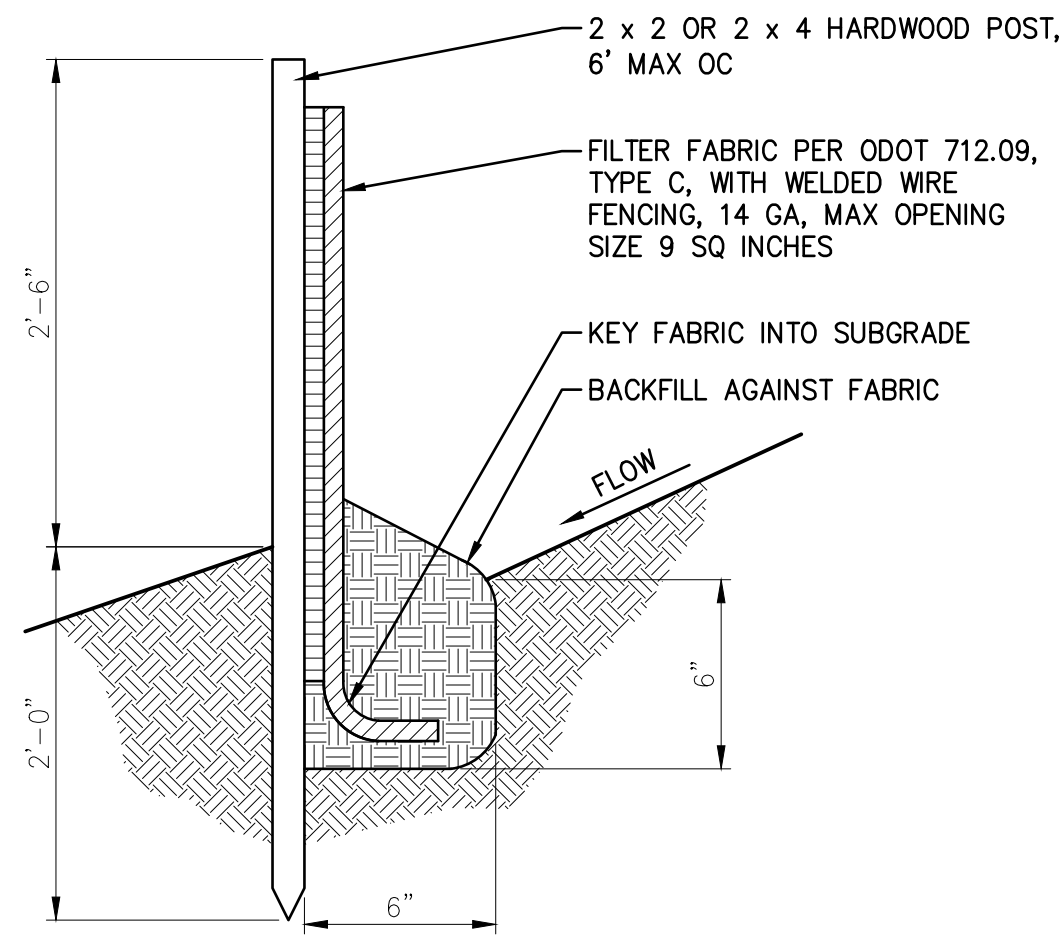
**MATERIAL MANAGEMENT PRACTICES:**

THE FOLLOWING PRACTICES SHALL BE EXECUTED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUN-OFF. THE JOB SITE SUPERINTENDENT IS RESPONSIBLE FOR ENSURING THESE PRACTICES ARE FOLLOWED:

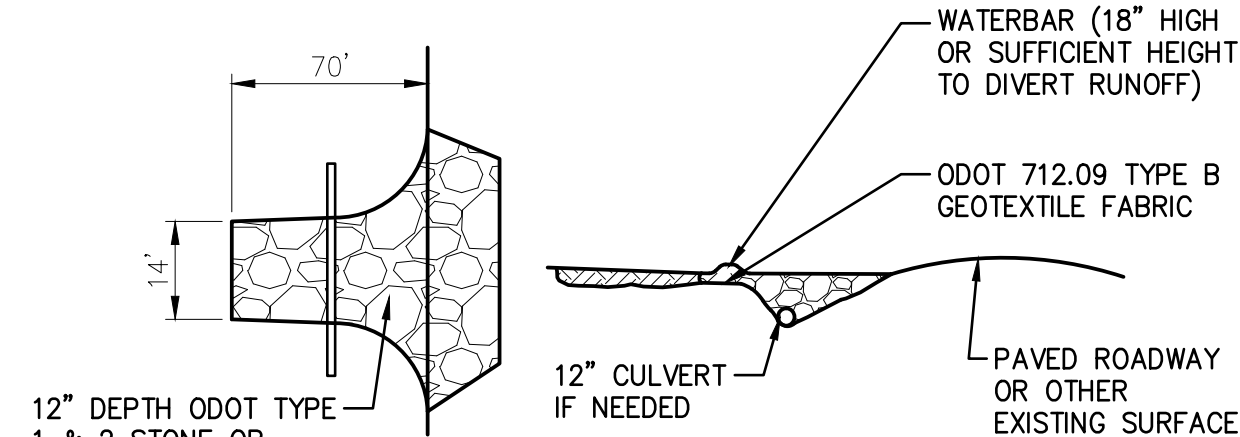
- STORE THE MINIMUM AMOUNT OF PRODUCT REQUIRED TO COMPLETE THE JOB, IF POSSIBLE, UNDER ROOF OR IN A CONTAINMENT AREA. PRODUCTS SHALL REMAIN IN THEIR ORIGINAL CONTAINER. LABEL MUST BE LEGIBLE.
- MANUFACTURER'S RECOMMENDATION SHALL BE FOLLOWED FOR USE AND DISPOSAL.
- PRODUCT TO BE USED ENTIRELY (WHEN POSSIBLE) PRIOR TO DISPOSING.
- MATERIAL SAFETY DATA SHEETS (MSDS) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES USED ON THE SITE SHALL BE OBTAINED AND POSTED IN THE IMMEDIATE AREA OF PRODUCT STORAGE AND SHALL BE USED FOR PROPER MANAGEMENT OF POTENTIAL WASTE.
- ALL HAZARDOUS WASTE MATERIAL WILL BE DISPOSED BY THE CONTRACTOR IN A MANNER SPECIFIED BY LOCAL, STATE OR FEDERAL REGULATIONS AND PER MANUFACTURER'S RECOMMENDATIONS.
- ALL PERSONNEL SHALL BE TRAINED IN THE PROPER HANDLING AND CLEAN UP OF SPILLED MATERIALS. NO SPILLED HAZARDOUS MATERIALS OR WASTE SHALL BE ALLOWED TO COME IN CONTACT WITH STORMWATER DISCHARGES. IF NECESSARY, THE CONTAMINATED STORMWATER WILL BE HELD ON SITE UNTIL IT MEETS LOCAL, STATE AND FEDERAL REGULATIONS.
- IN THE EVENT OF A SPILL THE FOLLOWING PROCEDURES MUST BE FOLLOWED:
  - ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
  - THE PROJECT MANAGER AND ENGINEER OF RECORD IMMEDIATELY NOTIFIED.
  - ANY SPILLS OF TOXIC OR HAZARDOUS MATERIALS MUST BE REPORTED TO THE APPROPRIATE LOCAL, STATE AND FEDERAL AGENCY. THE EPA NATIONAL RESPONSE CENTER (1-800-424-8802) MUST BE NOTIFIED WHEN A SPILL EXCEEDS THE REPORTABLE QUANTITY OF A SUBSTANCE. THE SUBSTANCES AND AMOUNTS ARE LOCATED IN FEDERAL REGULATIONS (40 CFR 110.114 AND 302).
  - IF A SPILL EXCEEDS A REPORTABLE QUANTITY, THE SWPP PLAN MUST BE MODIFIED WITHIN 7 DAYS PROVIDING A DESCRIPTION, DATE AND INCIDENT OF THE RELEASE.
- THE MIXING OR STORAGE OF COMPOUNDS SUCH AS FERTILIZERS, LIME ASPHALT, SOAPS AND SOLVENTS USED IN CLEANING VEHICLES, WASHOUT OF CONCRETE, PAINT OR STUCCO, FORM RELEASE OILS, OR CURING COMPOUNDS SHALL BE AWAY FROM STORM WATER DRAINAGE WAYS.
- FUEL TANKS MUST HAVE SECONDARY CONTAINMENT IN THE EVENT OF A LEAK OR SPILL.
- OPEN BURNING ON SITE IS A PROHIBITED ACTIVITY.
- ALL CONSTRUCTION AND DEMOLITION DEBRIS (C&DD) WASTE SHALL BE DISPOSED OF AT AN OHIO EPA APPROVED C&DD LANDFILL AS REQUIRED BY OHIO REVISED CODE 3714 AND LOCAL REGULATIONS.

**PRODUCT SPECIFIC PRACTICES:**

- PETROLEUM - PETROLEUM PRODUCTS WILL BE STORED IN CLEARLY LABELED TIGHTLY SEALED CONTAINERS. ANY ON SITE PETROLEUM STORAGE TANKS WILL HAVE A CONTAINMENT STRUCTURE AROUND IT FOR POTENTIAL SPILLS. DRIP PANS SHALL BE PROVIDED FOR ALL DISPENSERS. MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED WHEN ANY ASPHALT SUBSTANCES ARE USED ON SITE.
- FERTILIZERS - THE MANUFACTURER'S RECOMMENDED MINIMAL AMOUNTS SHALL BE APPLIED AND WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER. THE CONTENTS OF ANY PARTIALLY USED BAGS WILL BE TRANSFERRED TO SEALABLE PLASTIC BINS AND STORED UNDER COVER, AWAY FROM STORMWATER DRAINAGE WAYS.



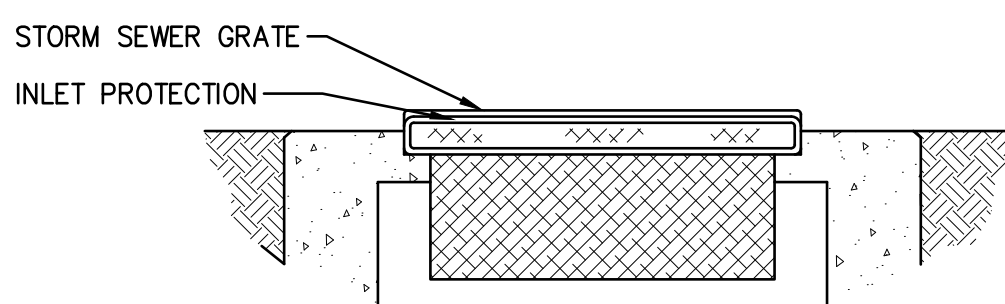
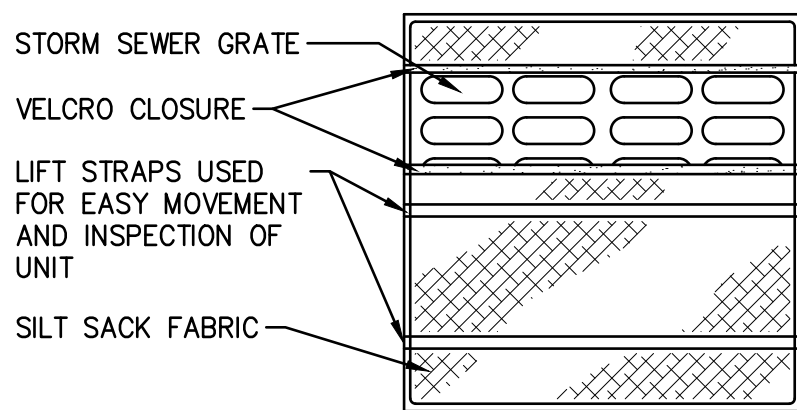
1 SILT FENCE  
7 NOT TO SCALE



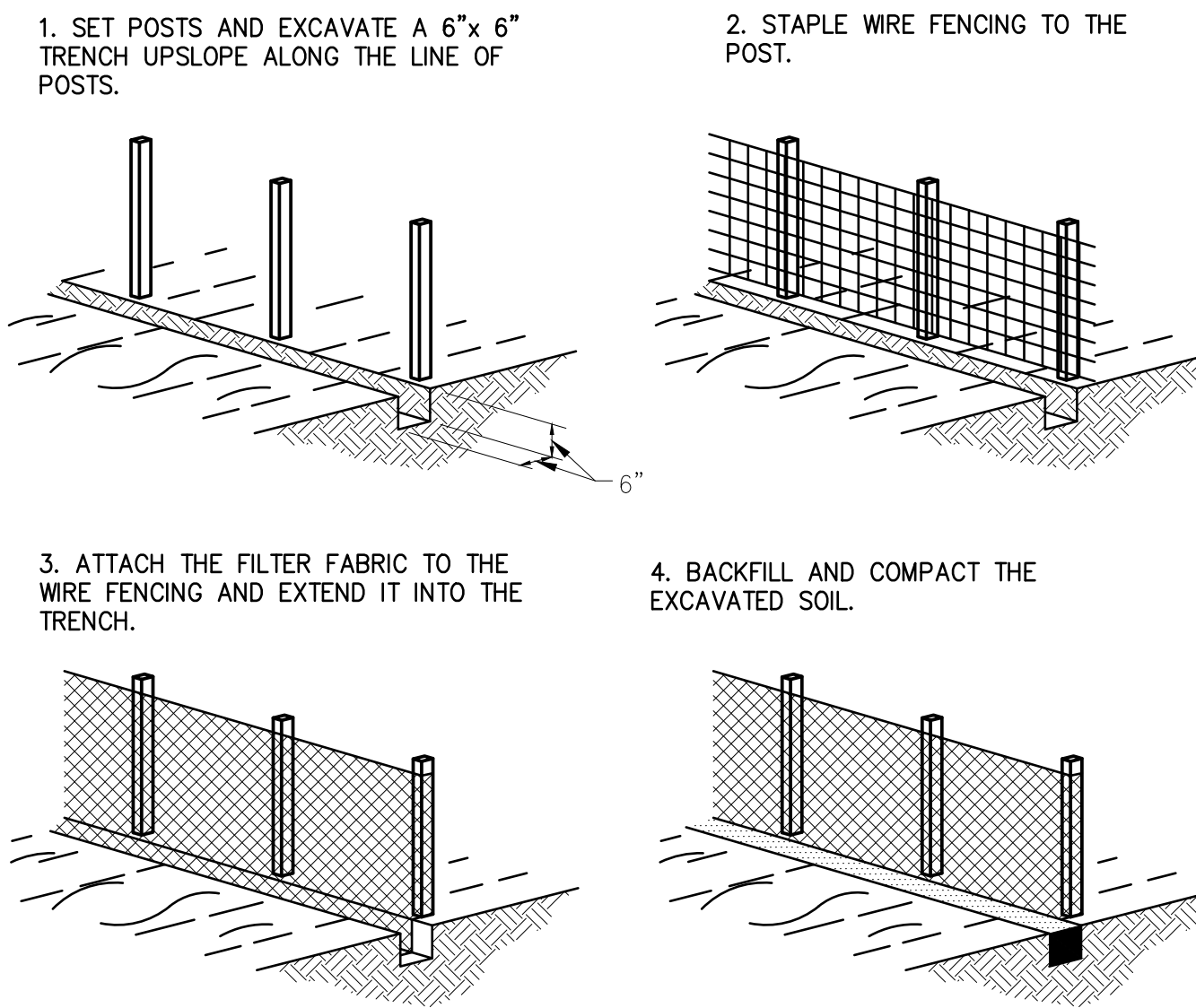
2 TEMPORARY CONSTRUCTION DRIVE  
7 NOT TO SCALE

**NOTES:**

- MAINTENANCE - TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED AWAY ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
- CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
- WHEN THE CONSTRUCTION HAUL ROAD IS NO LONGER NEEDED, THE CONTRACTOR SHALL REMOVE THE AGGREGATE AND RESTORE GRADE TO ITS ORIGINAL ELEVATION OR AS SHOWN ON THE PLANS.



3 INLET PROTECTION - SILT SACK  
7 NOT TO SCALE



<b>SITE LOCATION INFORMATION</b>		LATITUDE:	41°08'10"N
CITY OF CUYAHOGA FALLS		LONGITUDE:	81°28'58"W
CITY, VILLAGE, TOWNSHIP		SUMMIT COUNTY	OH STATE
CUYAHOGA RIVER			
NAME OF WATERSHED/IMMEDIATE RECEIVING WATER(S)			
2180 FRONT STREET, CUYAHOGA FALLS, OH 44221			
SITE ADDRESS			
CITY OF CUYAHOGA FALLS		330-971-8180	
DEVELOPER		PHONE	
2310 SECOND STREET, CUYAHOGA FALLS, OH 44221			
DEVELOPER ADDRESS			
HYDROLOGIC SOIL GROUPS:			
Uf - UDORTMENTS, SANITARY LANDFILL			

**SITE DESCRIPTION**

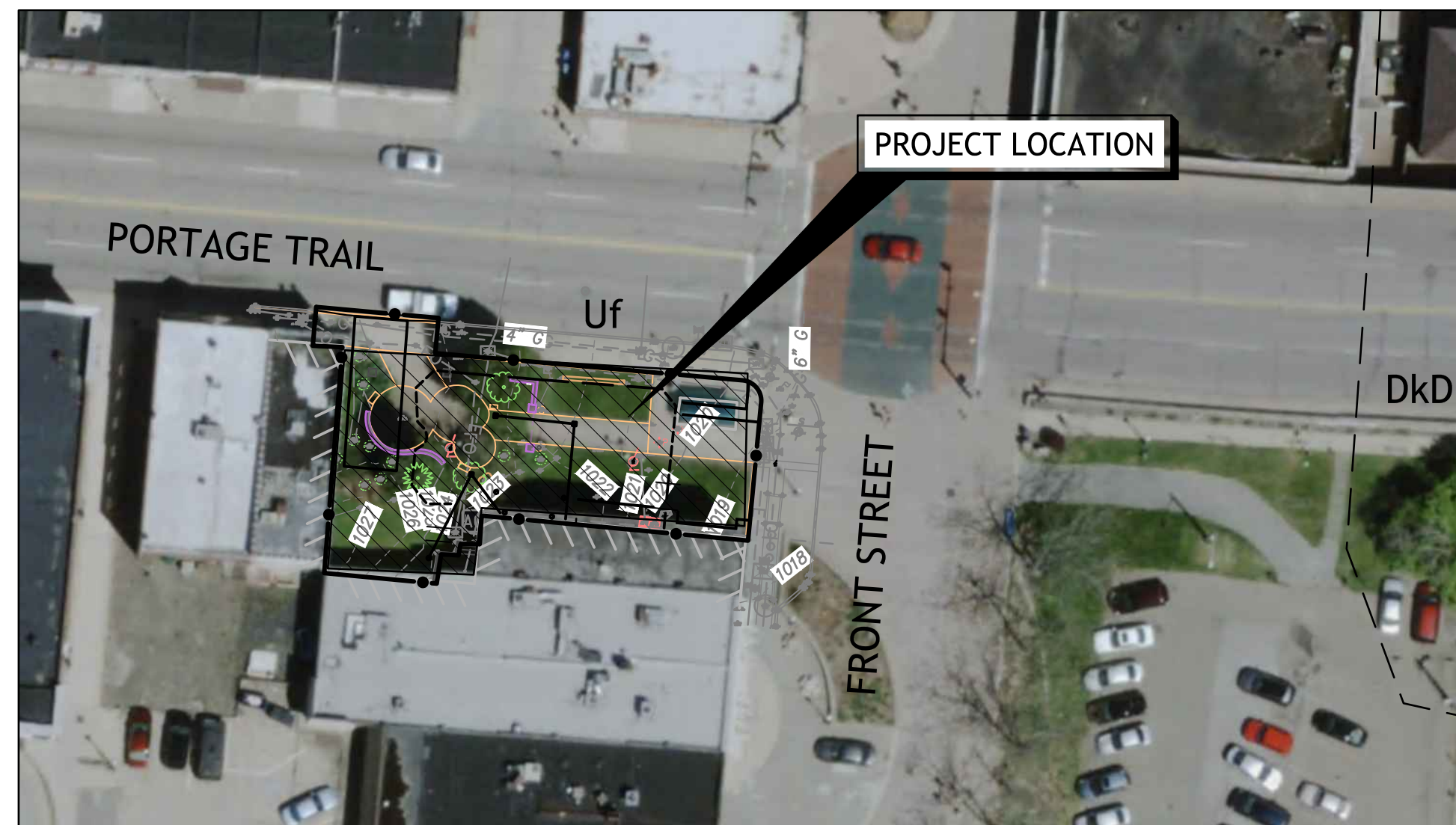
MARK ONE	TOTAL AREA	
SUBDIVISION	PRE-DEV CURVE NO.	0.122 AC
COMMERCIAL	POST DEV CURVE NO.	73.1
RESIDENTIAL	AREA TO BE CLEARED	90.1
PUD	AREA TO BE EXCAVATED	0.122 AC
OTHER	PRE-DEV IMPERVIOUSNESS	32%
	POST DEV IMPERVIOUSNESS	78%

**SCHEDULE OF MAJOR CONSTRUCTION OPERATIONS**

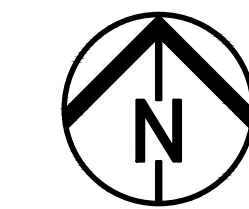
	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
CLEARING/DEMOLITION				●	●	●						
ROUGH GRADING				●	●	●						
PRE-CAST BLOCKS							●	●	●			
UTILITIES				●	●	●	●	●				
PAVING							●	●	●			
TOPSOIL AND SEEDING							●	●	●			
LANDSCAPING							●	●	●			
POST CONSTRUCTION BMPS							●	●	●			
TEMPORARY EROSION CONTROL				●	●	●	●	●	●			

**ACCEPTABLE EROSION CONTROL TIMETABLE**

	J	F	M	A	M	J	J	A	S	O	N	D
TEMPORARY SEEDING				●	●	●	●	●	●	●	●	●
PERMANENT SEEDING				●	●	●	●	●	●	●	●	●
MULCHING				●	●	●	●	●	●	●	●	●
MAINTENANCE				●	●	●	●	●	●	●	●	●



**SOILS MAP**



NOT TO SCALE



FRONT STREET CORNER  
PLAZA  
CITY OF CUYAHOGA FALLS



CITY OF Cuyahoga Falls



REVISIONS		
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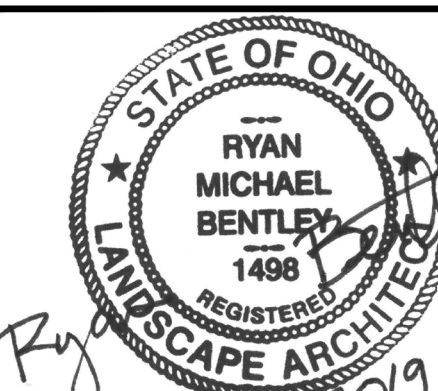
PROJECT NO.:	19-00316-010
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SWPPP NOTES

**FRONT STREET CORNER  
 PLAZA  
 CITY OF CUYAHOGA FALLS**



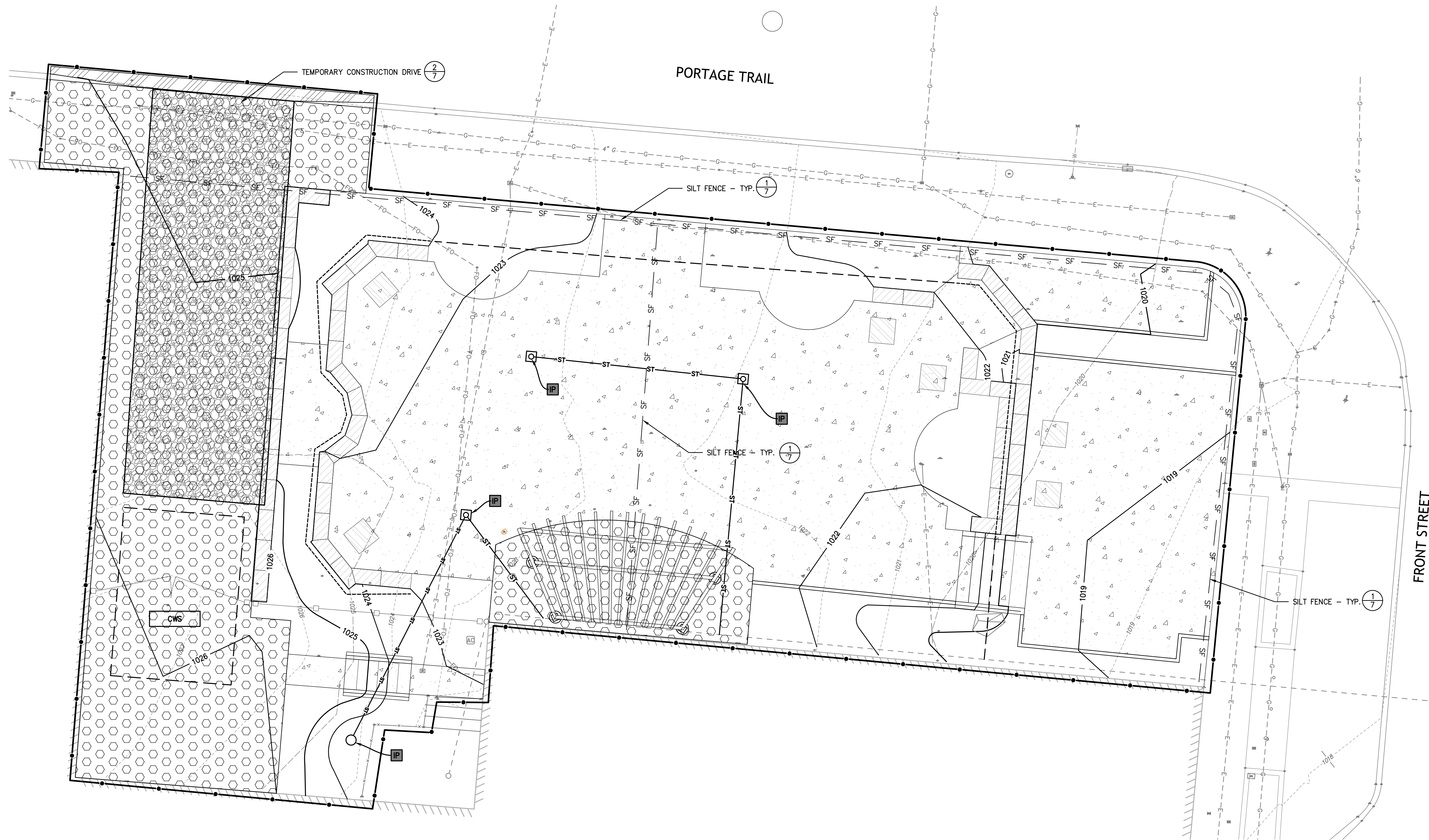
CITY OF **Cuyahoga Falls**



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**SWPP PLAN**



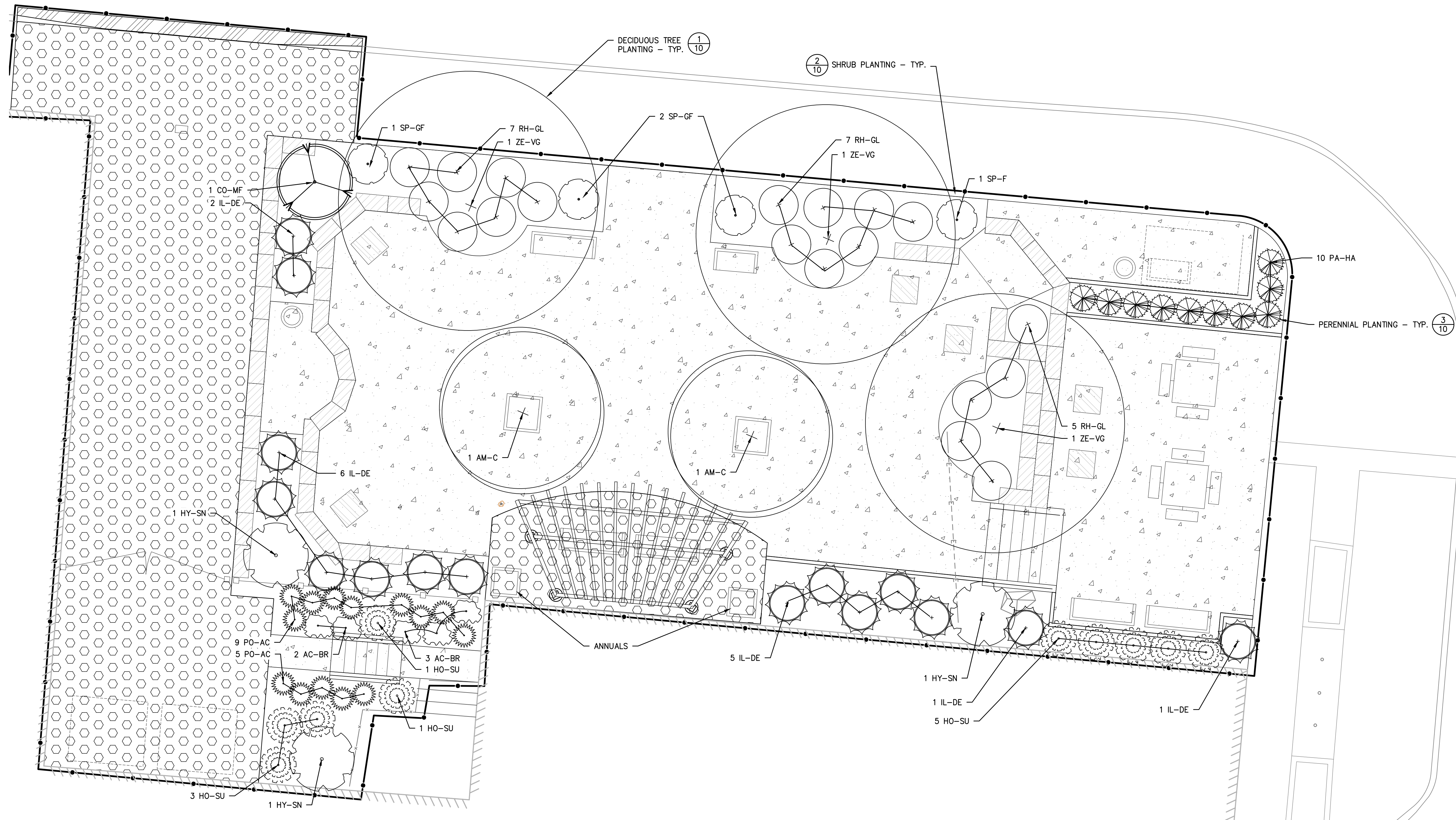
**STORMWATER POLLUTION PREVENTION NOTES**

- ALTHOUGH SILT FENCE IS SHOWN AS CONTINUOUS LINE ON PLAN, CONTRACTOR SHALL INSTALL SILT FENCE IN SECTIONS PARALLEL WITH THE CONTOURS ON SLOPED AREAS TO ENSURE SEDIMENT IS TRAPPED BY SILT FENCE.
- WORK SHALL BE PERFORMED IN A LINEAR FASHION. STORMWATER AND EROSION CONTROLS SHALL BE INSTALLED PRIOR TO PRECEDING WITH ANY EARTH DISTURBANCE.

**STORMWATER POLLUTION PREVENTION LEGEND**

	CONSTRUCTION LIMITS		TEMPORARY CONSTRUCTION DRIVE (2/7)
	SILT FENCE SILT SOCK		EXISTING CONTOURS
	INLET PROTECTION		PROPOSED CONTOUR
	CONCRETE WASHOUT STATION		

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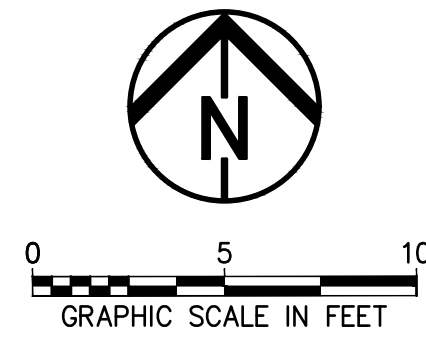
**FRONT STREET CORNER  
 PLAZA  
 CITY OF CUYAHOGA FALLS**



**CITY OF Cuyahoga Falls**



KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	NOTES	HEIGHT	WIDTH
<b>PLANTING SCHEDULE</b>							
<b>Shade Tree</b>							
ZE-VG	3	Zelkova serrata var. 'Village Green'	Village Green Zelkova	2"	B&B	45'	40'
<b>Ornamental Trees</b>							
AM-C	2	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	6' Height, Single-stem	B&B	20'-25'	15'
<b>Shrubs</b>							
SP-GF	4	Spiraea x bumalda 'Goldflame'	Goldflame Spirea	#5	Cont. (24")	2.5'	4'
CO-MF	1	Cornus sanguinea 'Midwinter Fire'	Midwinter Fire Bloodtwig Dogwood	#5	Cont. (24")	7'	7'
HY-SN	3	Hydrangea quercifolia 'Snow Queen'	Snow Queen Oakleaf Hydrangea	#5	Cont. (24")	5'	5'
IL-DE	15	Illex glabra 'Densa'	Illex glabra	#5	Cont. (18")	3'	4'
RH-GL	19	Rhus aromatica 'Gro-low'	Gro-low Fragrant Sumac	#3	Cont. (15")	30"	30"
<b>Perennials</b>							
AC-BR	5	Actea racemosa 'Brunette'	Brunette Black Cohosh	#2	Cont.	4'	
PA-HA	10	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	#2	Cont.	2.5'	
HO-SU	10	Hosta sieboldiana 'Sum and Substance'	Sum and Substance Hosta	#2	Cont.	2'	
PO-AC	14	Polystichum acrostichoides	Christmas Fern	#2	Cont.	3'	



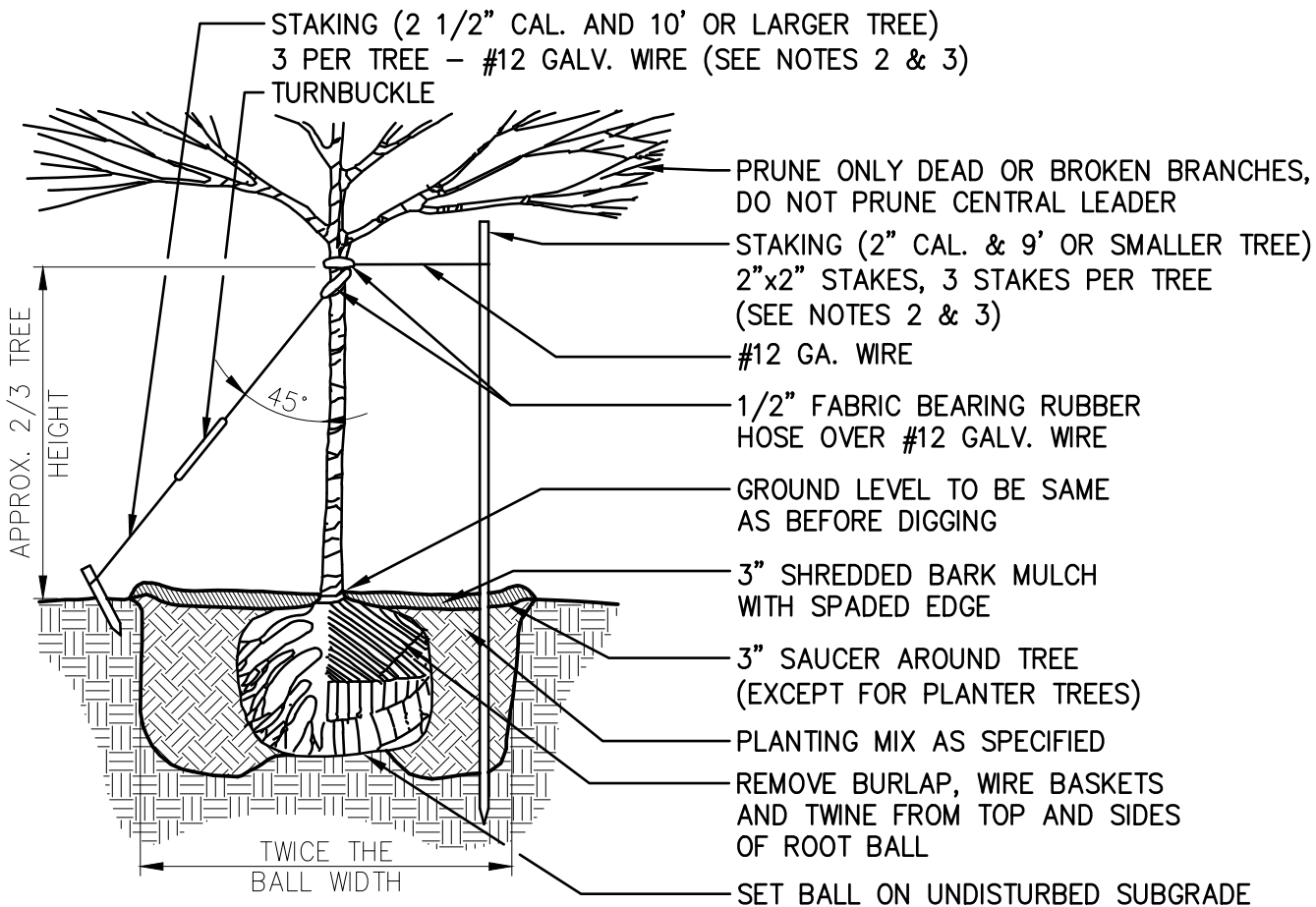
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**PLANTING PLAN**

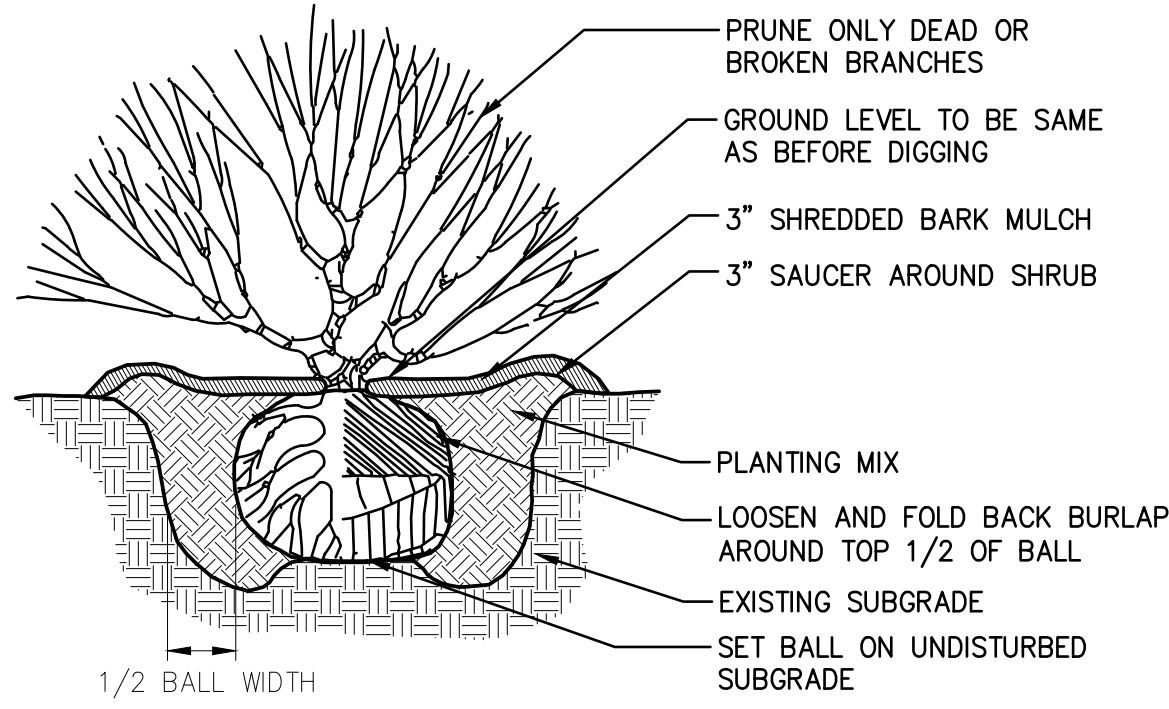
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- NOTES:**
1. REMOVE BURLAP, WIRE BASKETS AND TWINE FROM TOP AND SIDES OF ROOT BALL. CENTER TREE IN HOLE SET TOP OF BALL 1" ABOVE FINISH GRADE.
  2. STAKING & GUYING TREES IS OPTIONAL, HOWEVER THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLED TREES STAYING PLUMB AND STABLE. IF A NON-STAKED TREE MOVES OUT OF PLUMB DURING THE WARRANTY PERIOD THE CONTRACTOR SHALL STRAIGHTEN & 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.

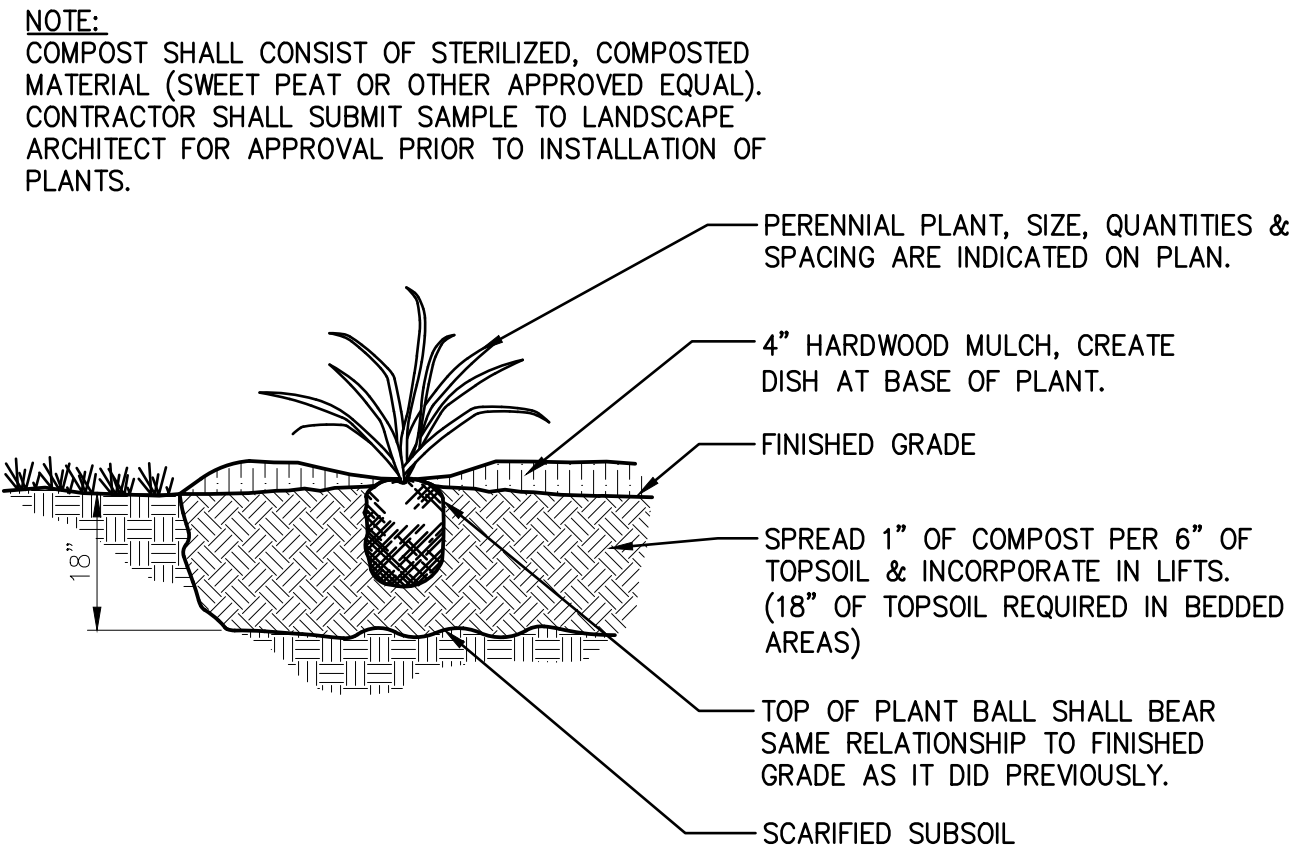


**1** DECIDUOUS TREE PLANTING  
10 NOT TO SCALE

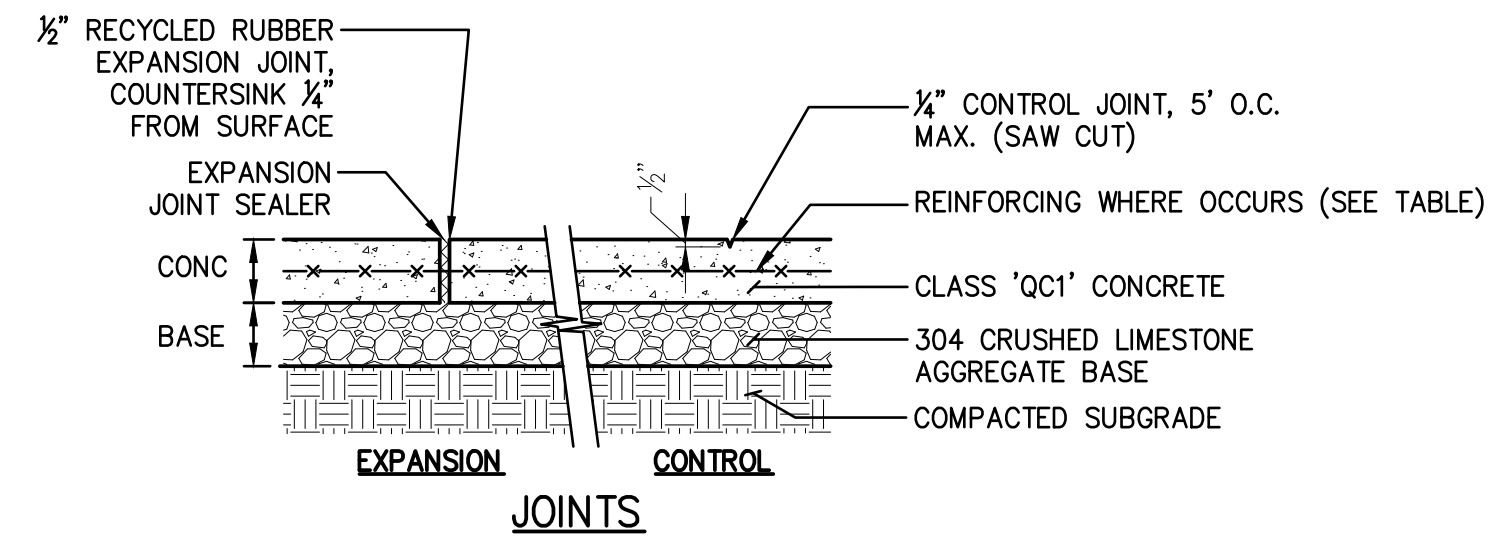
- NOTES:**
1. PLANTING MIX TO CONSIST OF 1" COMPOST PER 6" OF TOPSOIL.
  2. COMPOST SHALL CONSIST OF STERILIZED, COMPOSTED MATERIAL (SWEET PEAT OR OTHER APPROVED EQUAL). CONTRACTOR SHALL SUBMIT SAMPLE TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION OF PLANTS.
  3. MULCH TO FORM CONTINUOUS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



**2** SHRUB PLANTING  
10 NOT TO SCALE



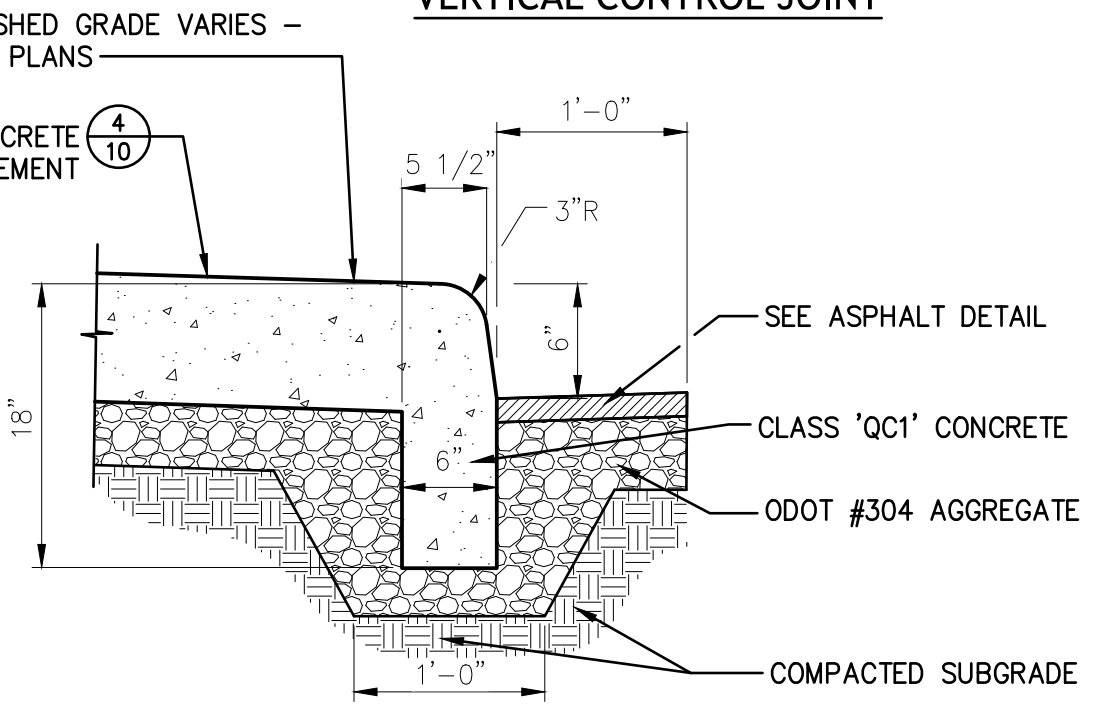
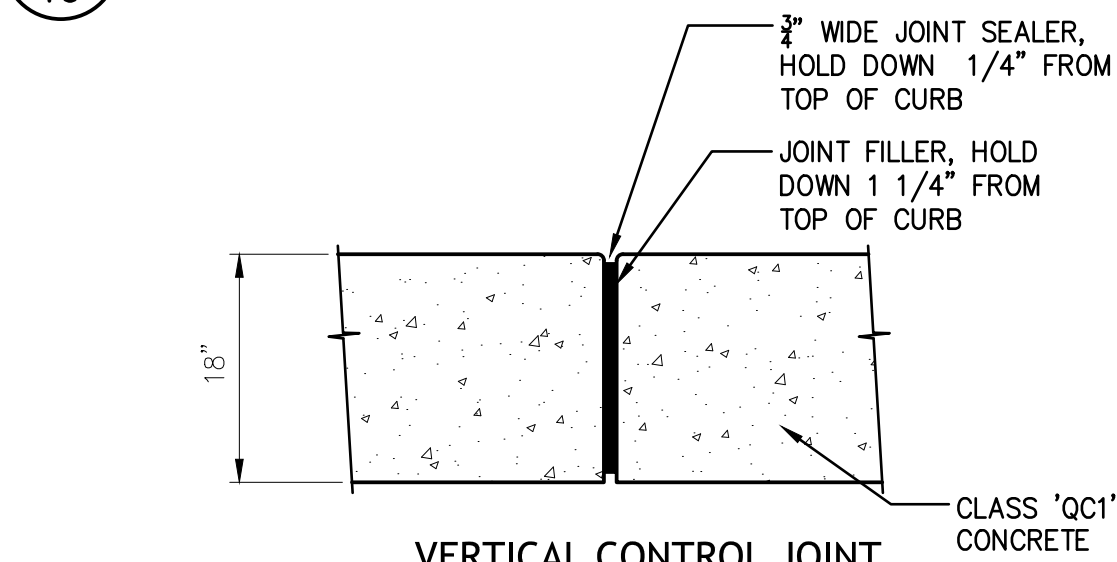
**3** PERENNIAL PLANTING  
10 NOT TO SCALE



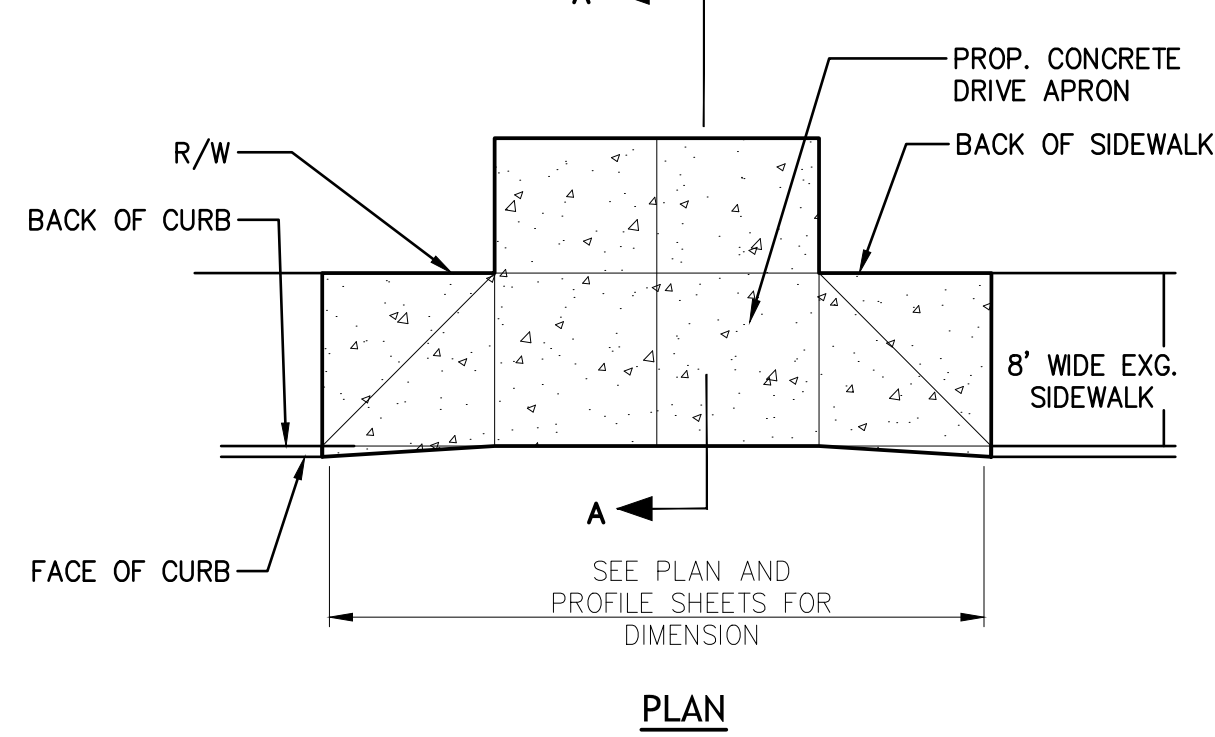
CONCRETE PAVEMENT	TYPE	CONC	BASE	REINFORCING
STANDARD DUTY	A	6"	4"	NONE
HEAVY DUTY	B	8"	4"	WWF 4X4 W2.9 X W2.9
HEAVY DUTY IN R/W	B	8"	4"	NONE

- NOTES:**
1. EXPANSION JOINT - 1/2" AT 20' O.C. MAX. OR AS SHOWN ON DRAWINGS AT ALL CURBS, WALKS, WALLS AND OTHER FIXED OBJECTS.
  2. CONTROL JOINT - AS SHOWN ON DRAWINGS
  3. CROSS SLOPE - 1/4" PER FOOT MIN. TO DRAIN
  4. MEDIUM BROOM FINISH PERPENDICULAR TO THE DIRECTION OF TRAVEL.
  5. USE EDGING TOOL AT PERIMETER

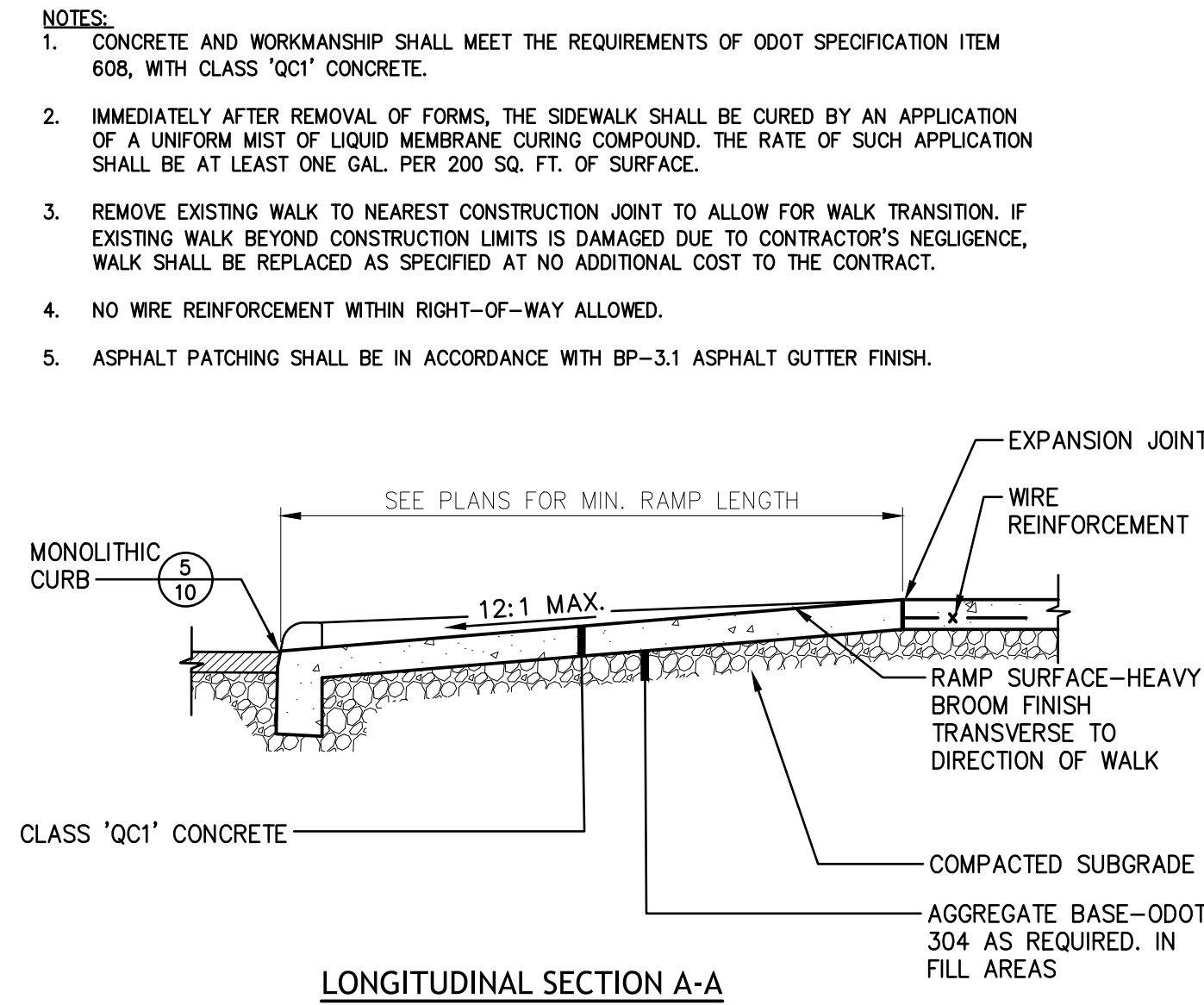
**4** CONCRETE PAVEMENT  
10 NOT TO SCALE



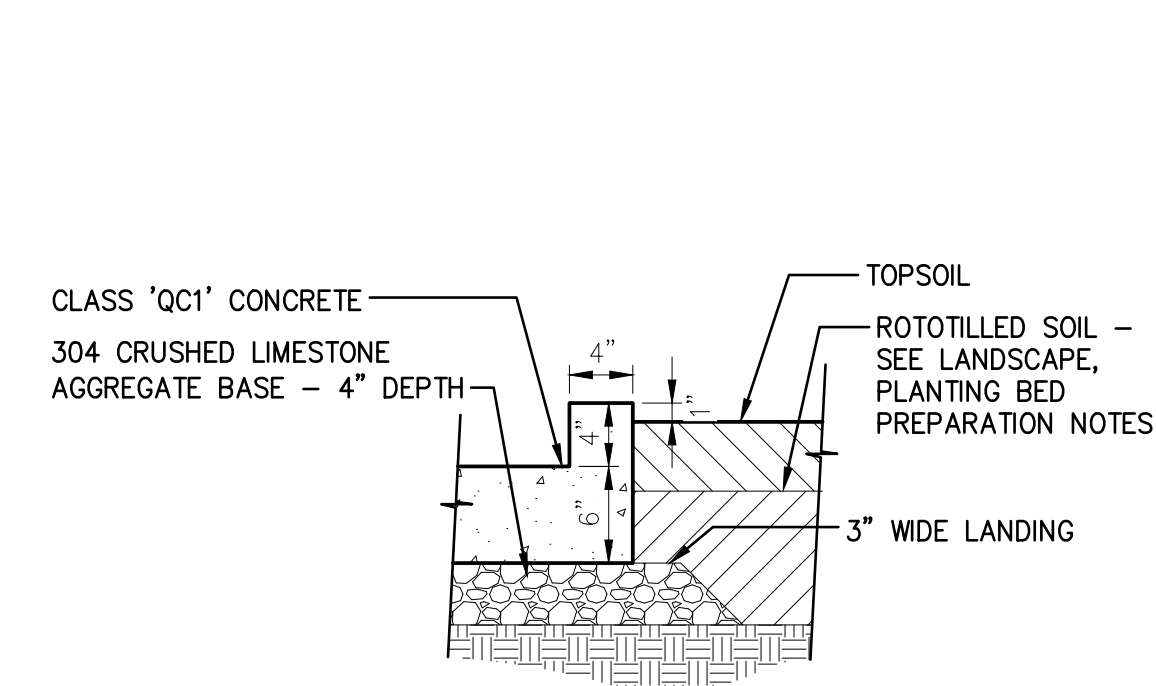
**5** MONOLITHIC CURB  
10 NOT TO SCALE



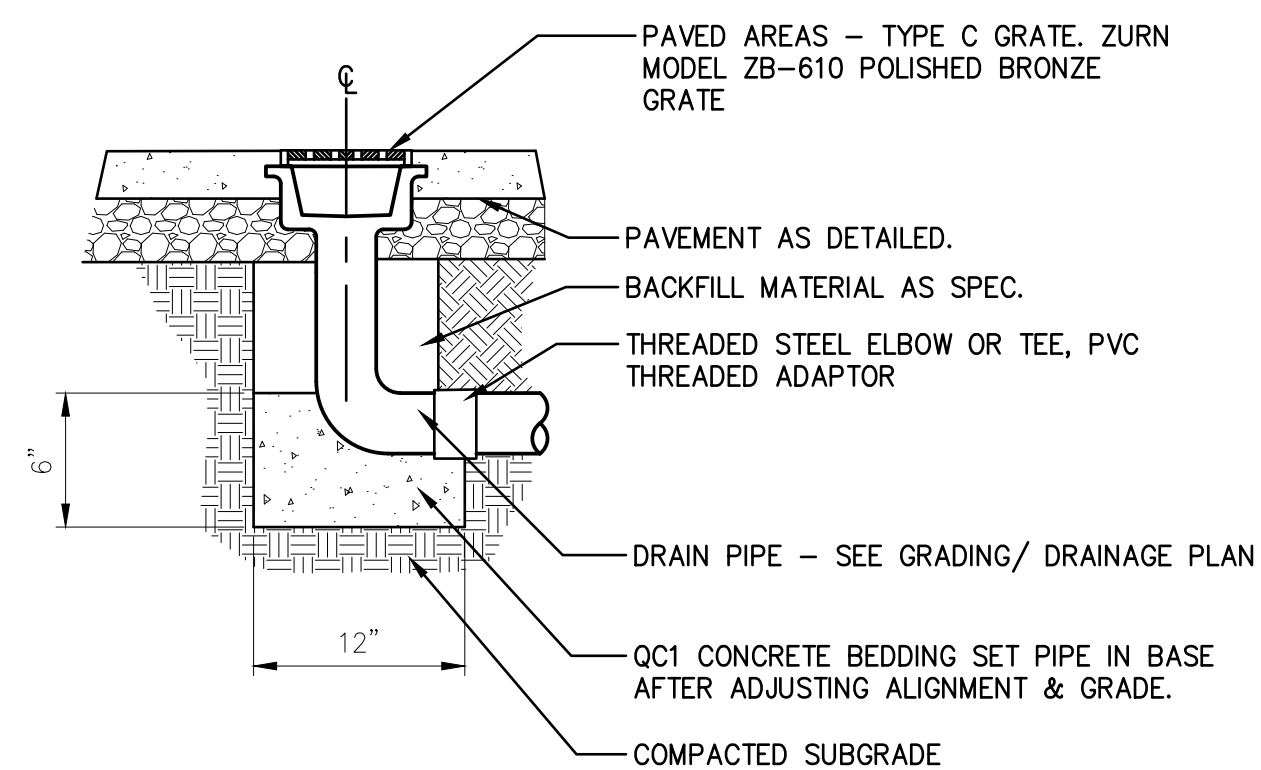
**6** DRIVE APRON CURB CUT  
10 NOT TO SCALE



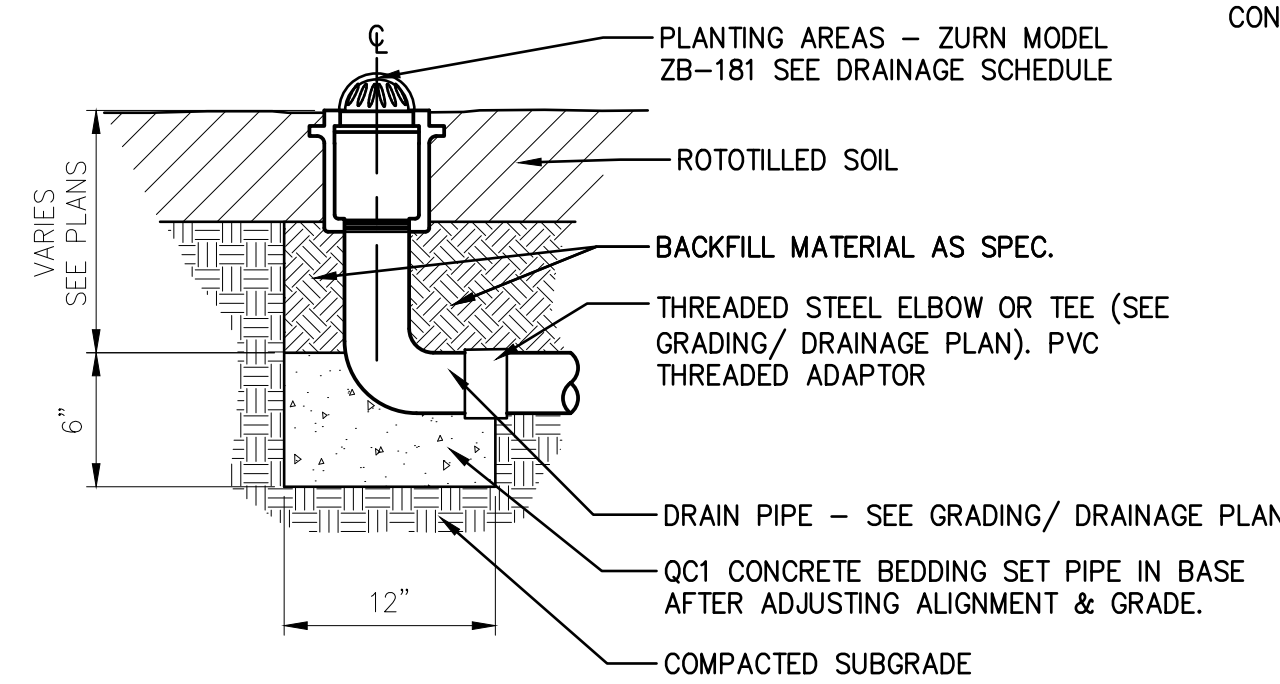
**7** COLLAPSIBLE BOLLARD  
10 NOT TO SCALE



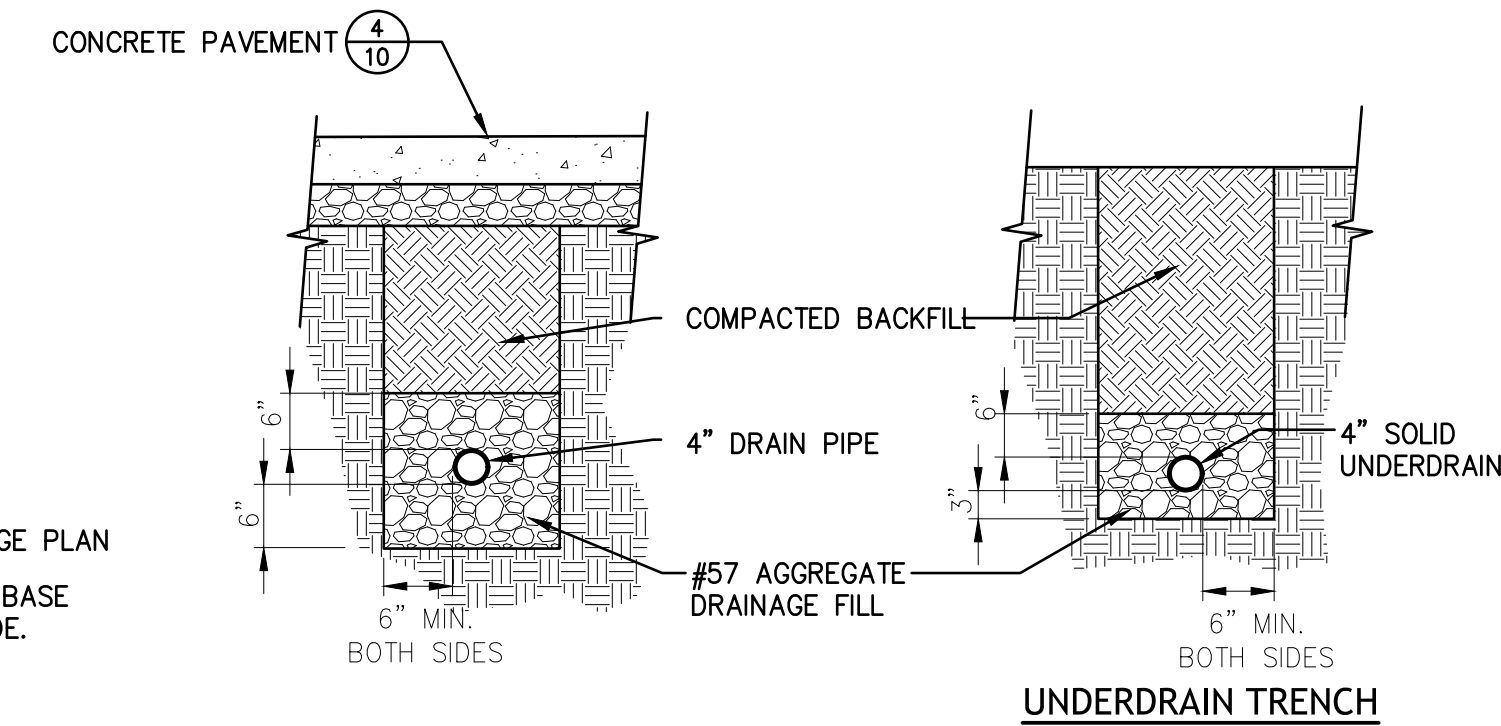
**8** LANDSCAPE BED PERIMETER CURB  
10 NOT TO SCALE



**9** COURTYARD STORM INLET  
10 NOT TO SCALE



**10** AREA STORM INLET  
10 NOT TO SCALE



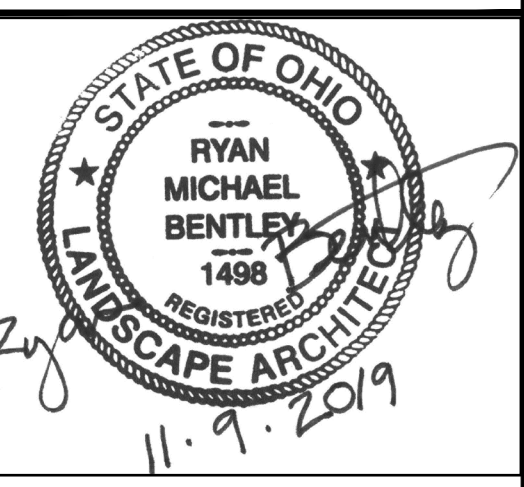
**11** PIPE TRENCH  
10 NOT TO SCALE

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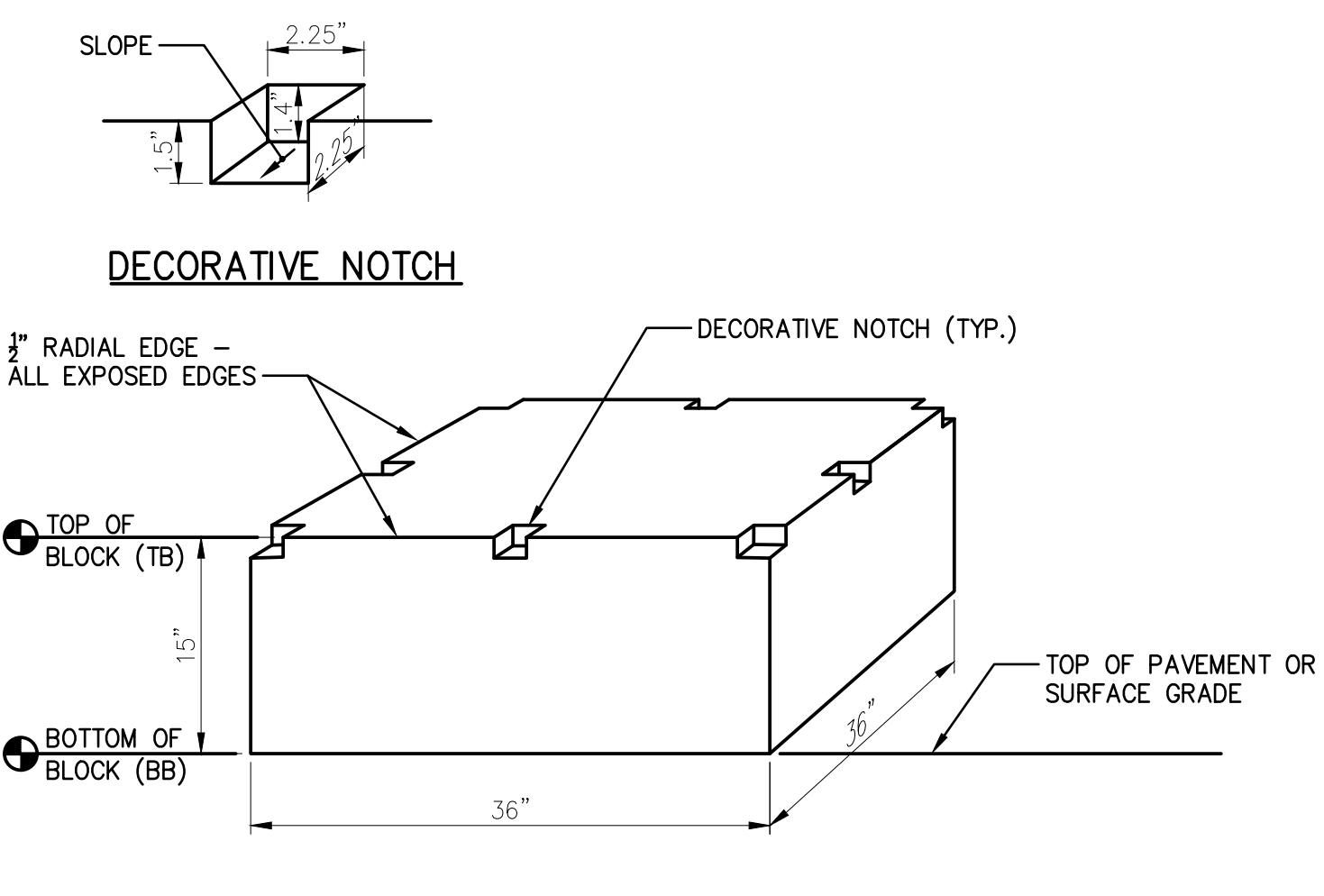
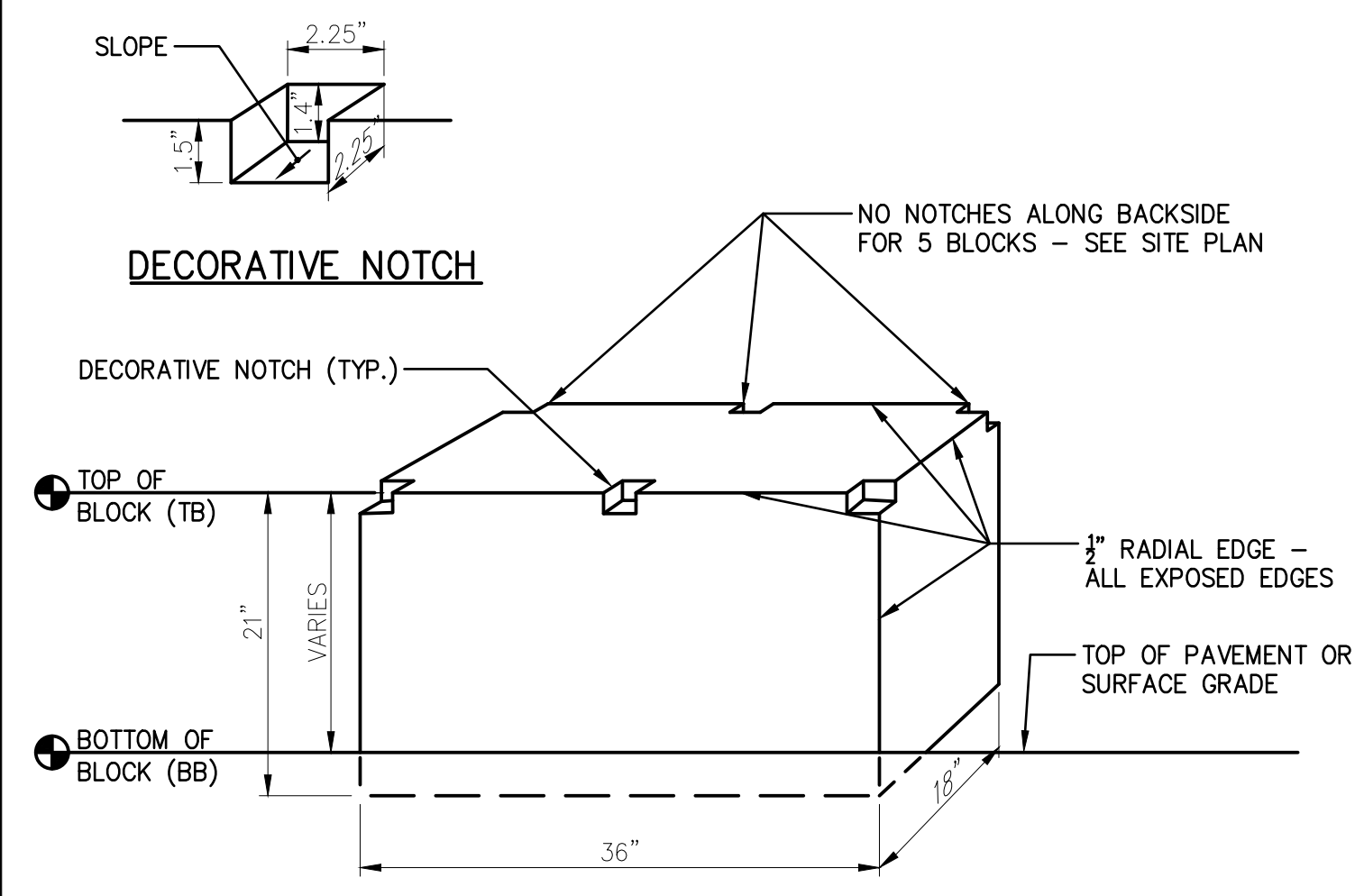
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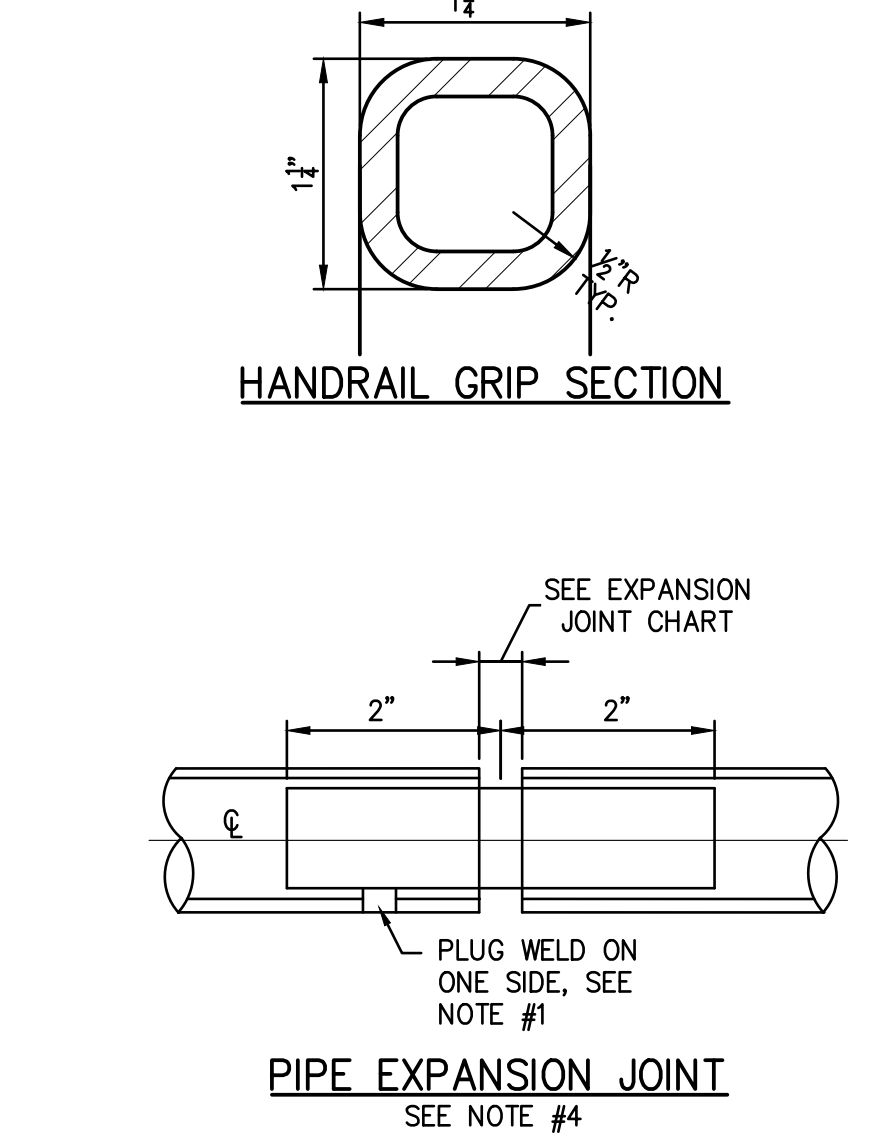
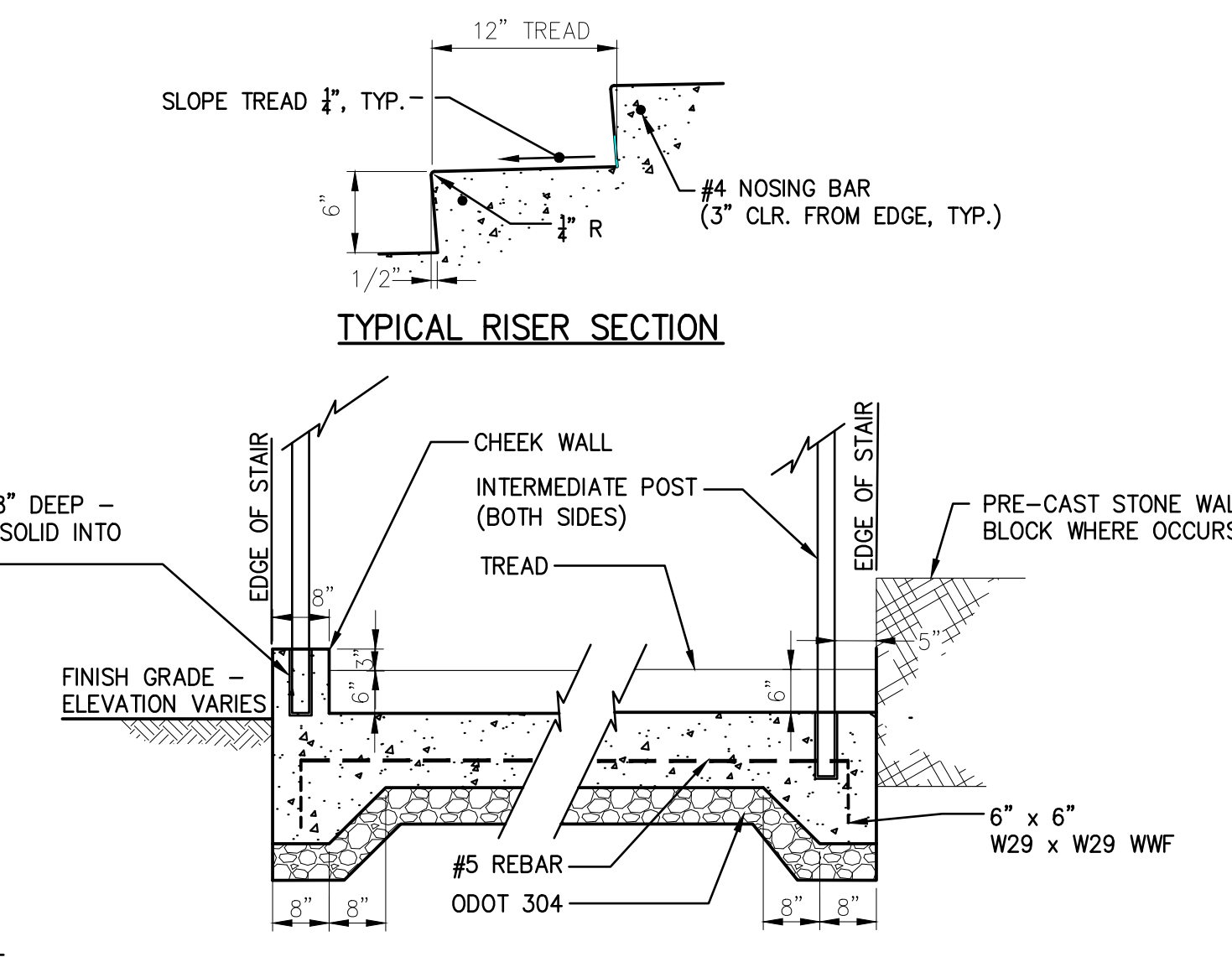
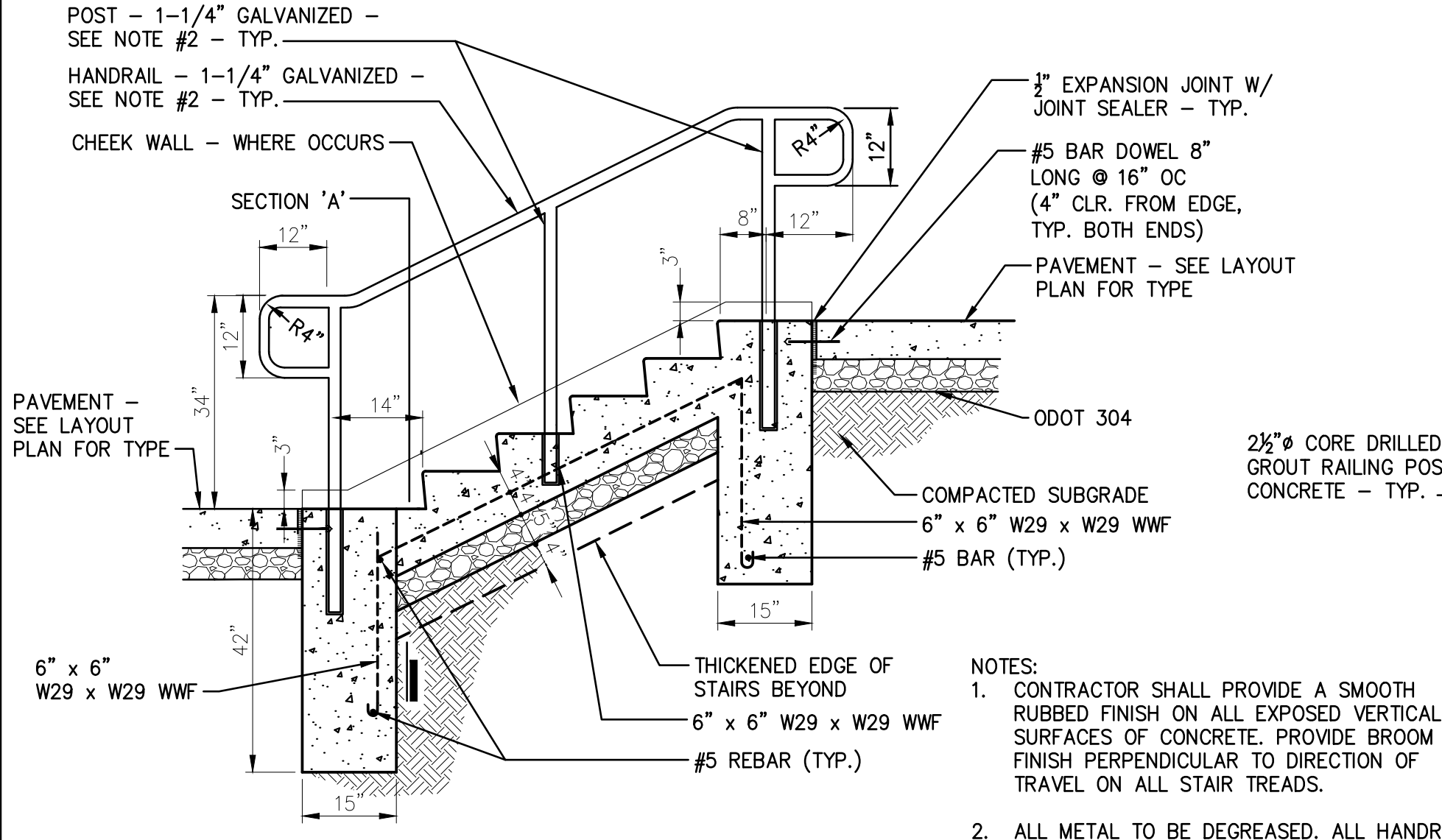
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**CONSTRUCTION  
 DETAILS - LANDSCAPE**



**1 PRE-CAST STONE WALL BLOCK**  
 11 NOT TO SCALE

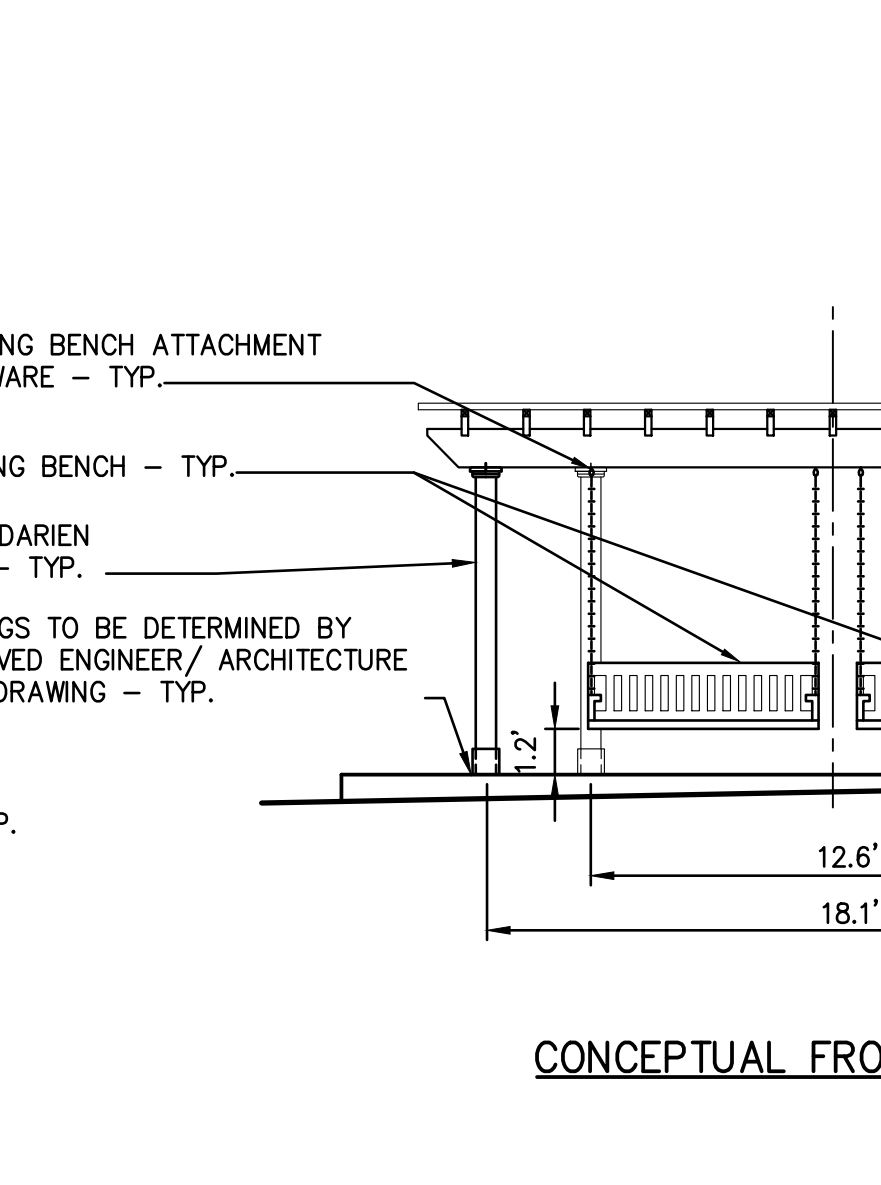
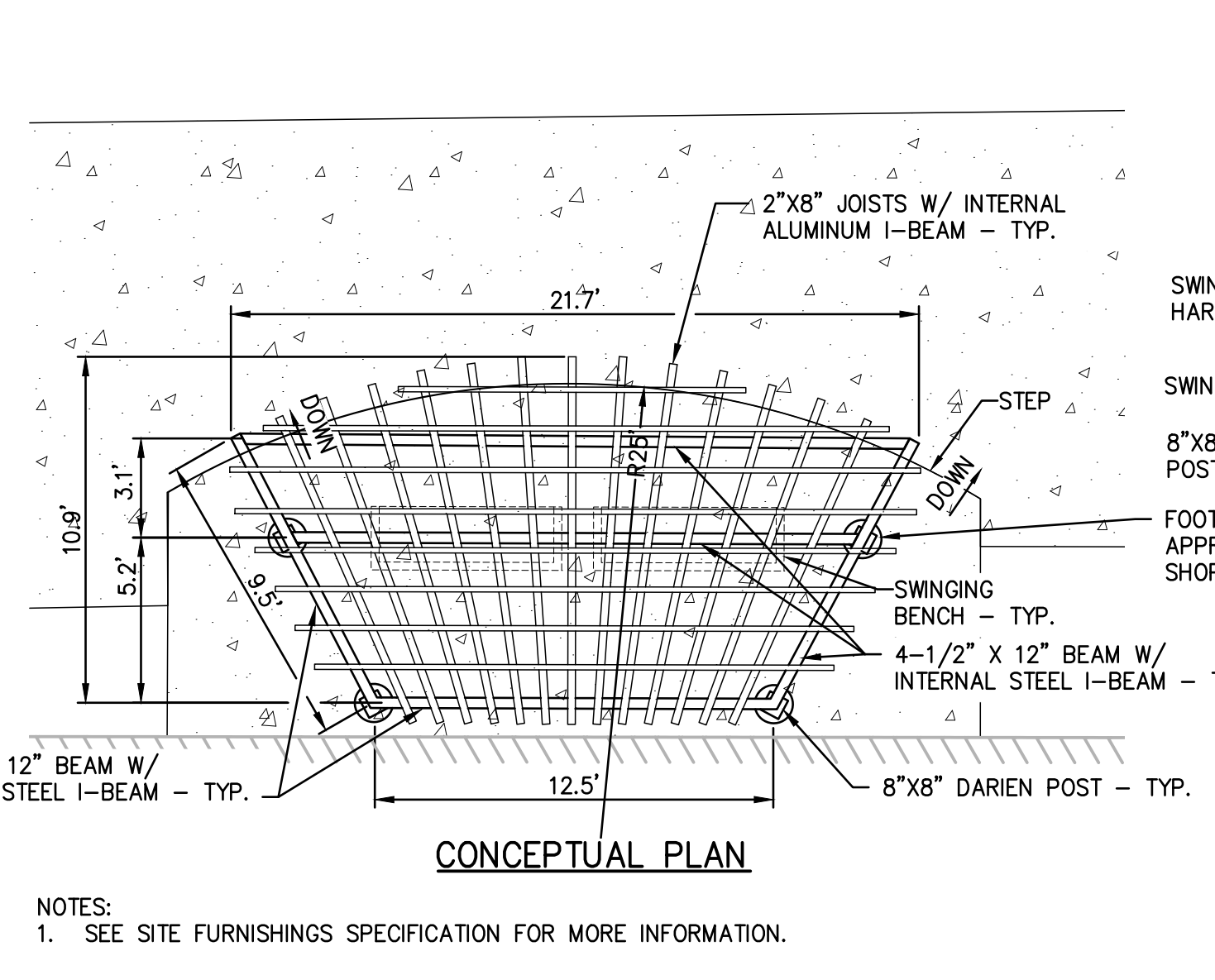
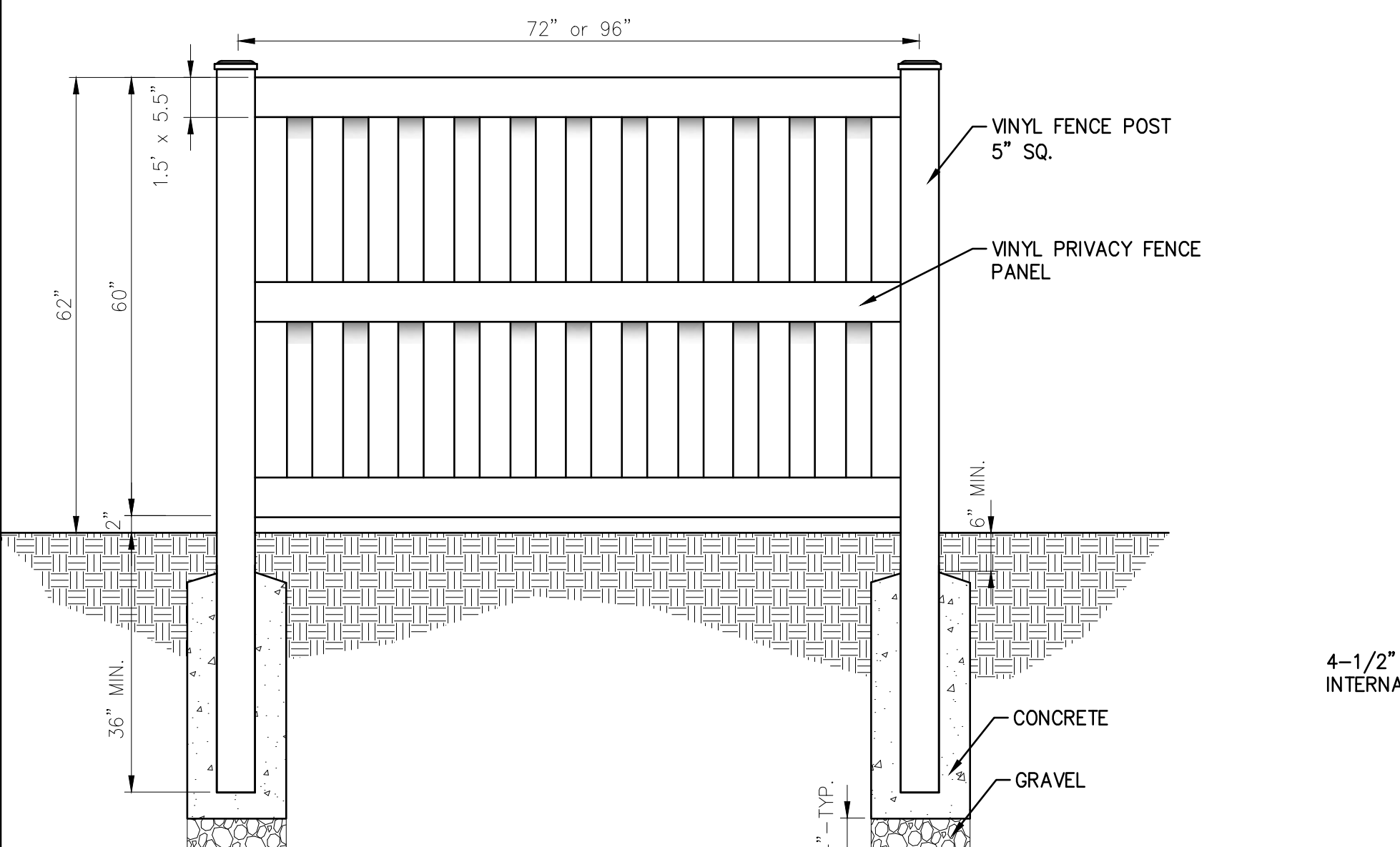
**2 PRE-CAST STONE TABLE**  
 11 NOT TO SCALE



EXPANSION JOINT CHART	
TEMPERATURE	EXPANSION GAP
120°	0"
107.5°	1/16"
95°	1/8"
82.5°	3/16"
70°	1/4"
57.5°	5/16"
45°	3/8"
32.5°	7/16"
20°	1/2"
7.5°	9/16"
-5°	5/8"

**3 CONCRETE STAIR W/ HANDRAIL**  
 11 NOT TO SCALE

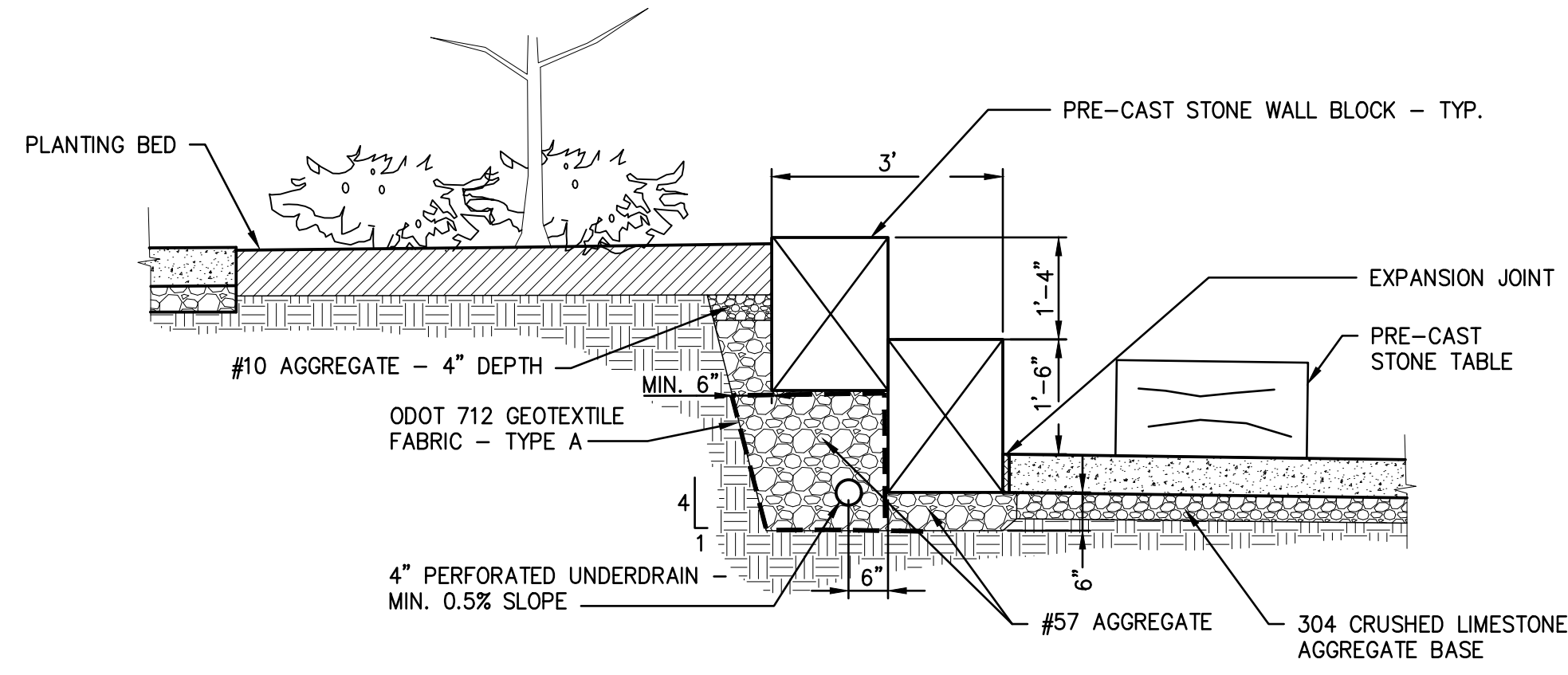
**SECTION 'A' - THICKENED EDGE OF STAIR**



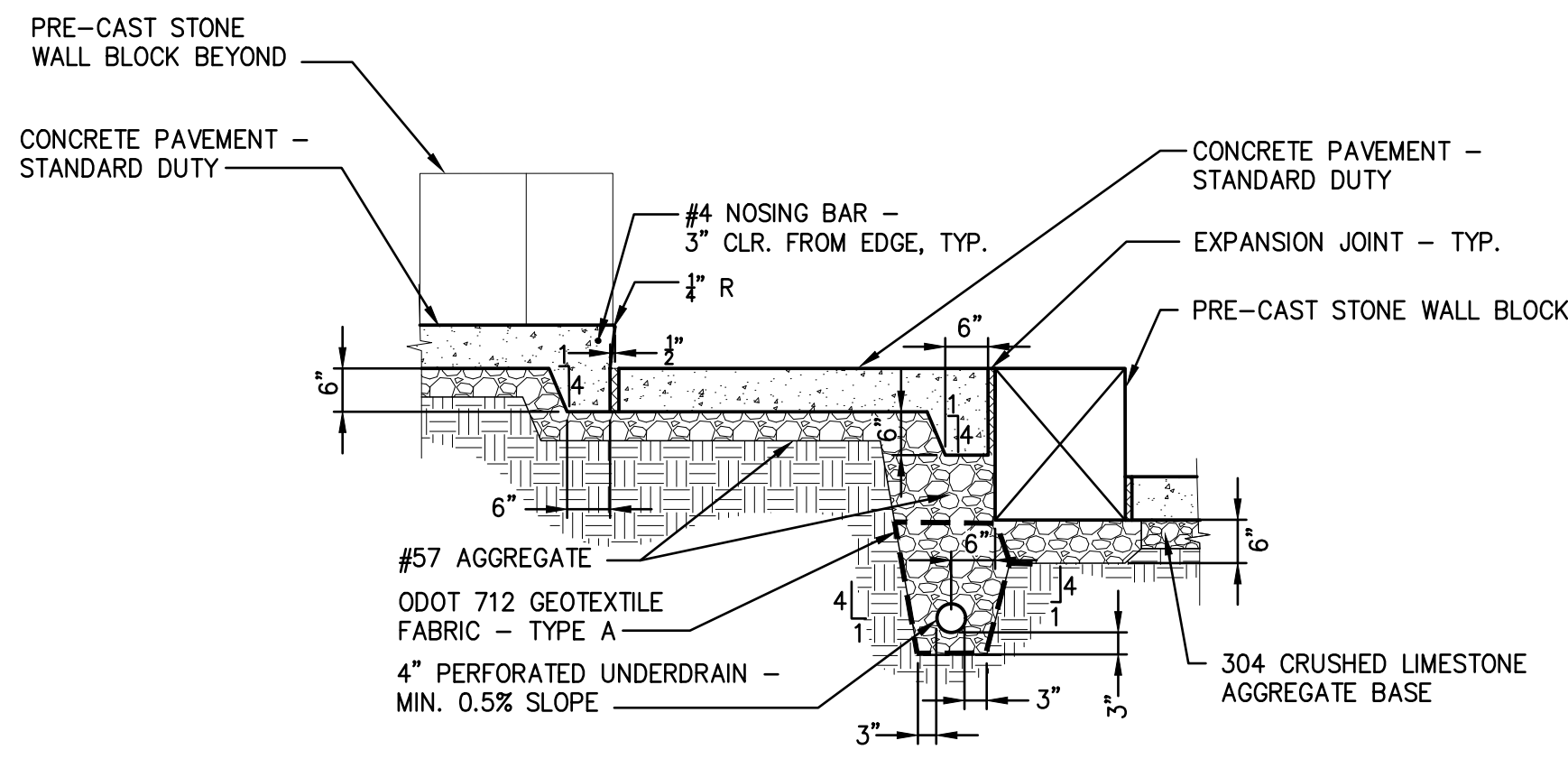
**5 RADIAL PERGOLA W/ SWINGING BENCHES**  
 11 NOT TO SCALE

**4 VINYL PRIVACY FENCE - 5' HIGH**  
 11 NOT TO SCALE

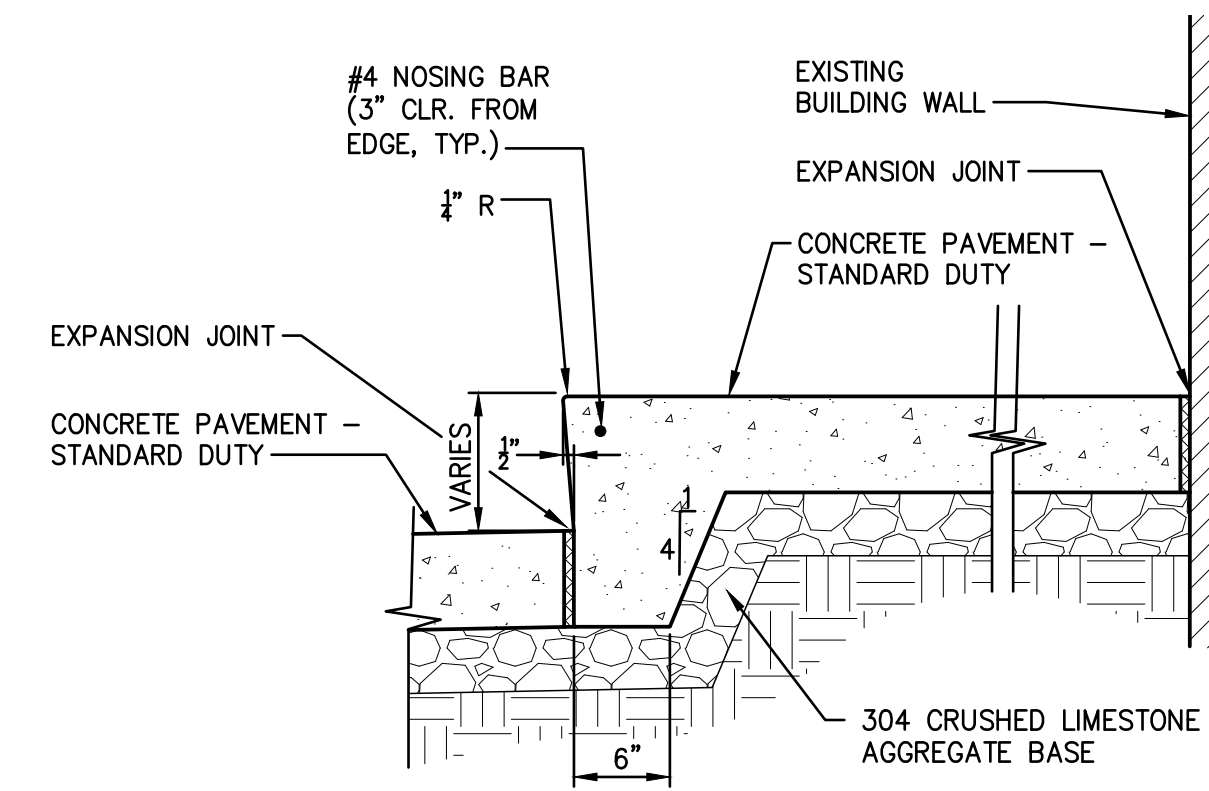
CUYAHOGA FALLS, CITY OF 19-00316-010 FRONT STREET CORNER PLAZA CADD DETAILS 19-00316-010 - 11/8/2019 3:27:12 PM



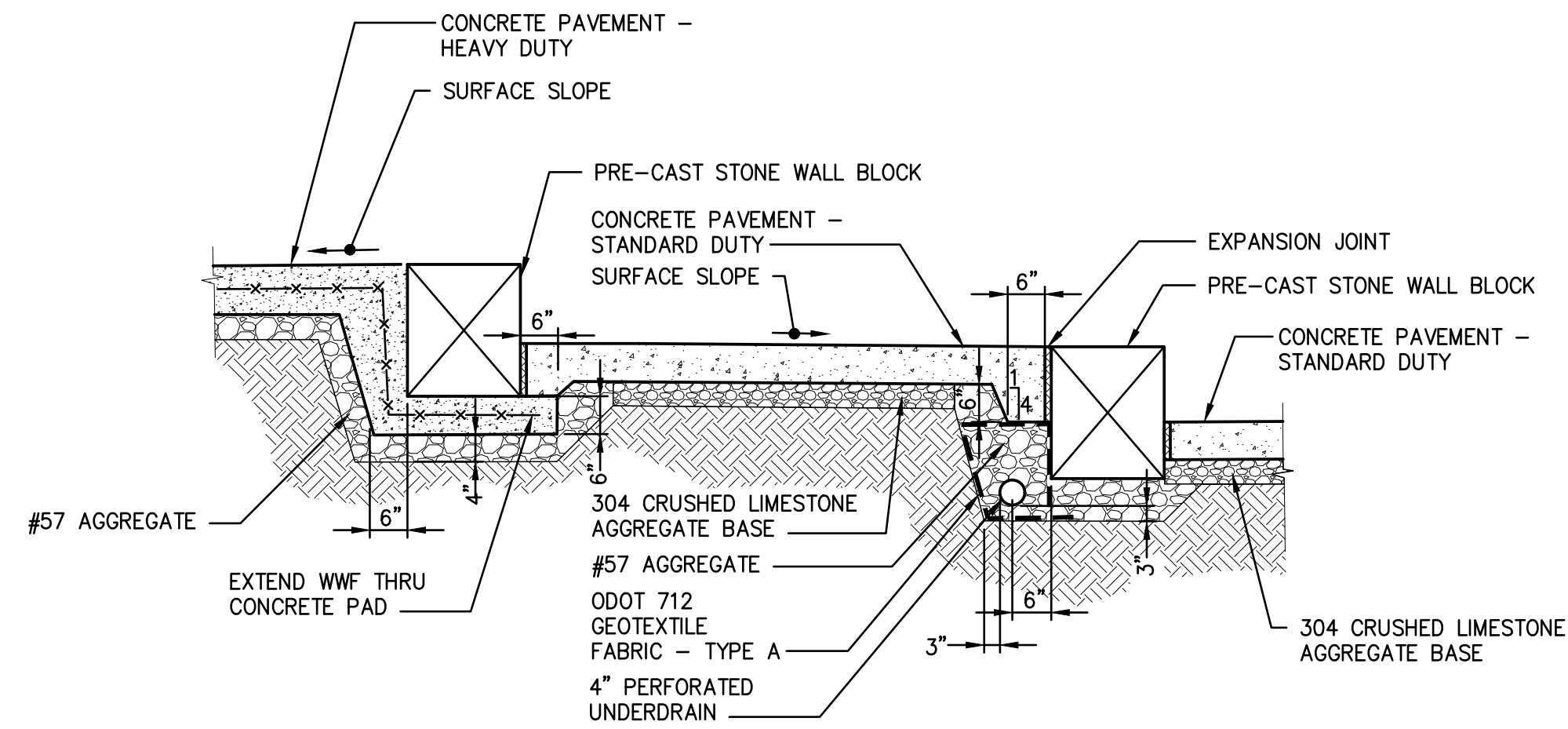
1 SECTION A -A'  
12 NOT TO SCALE



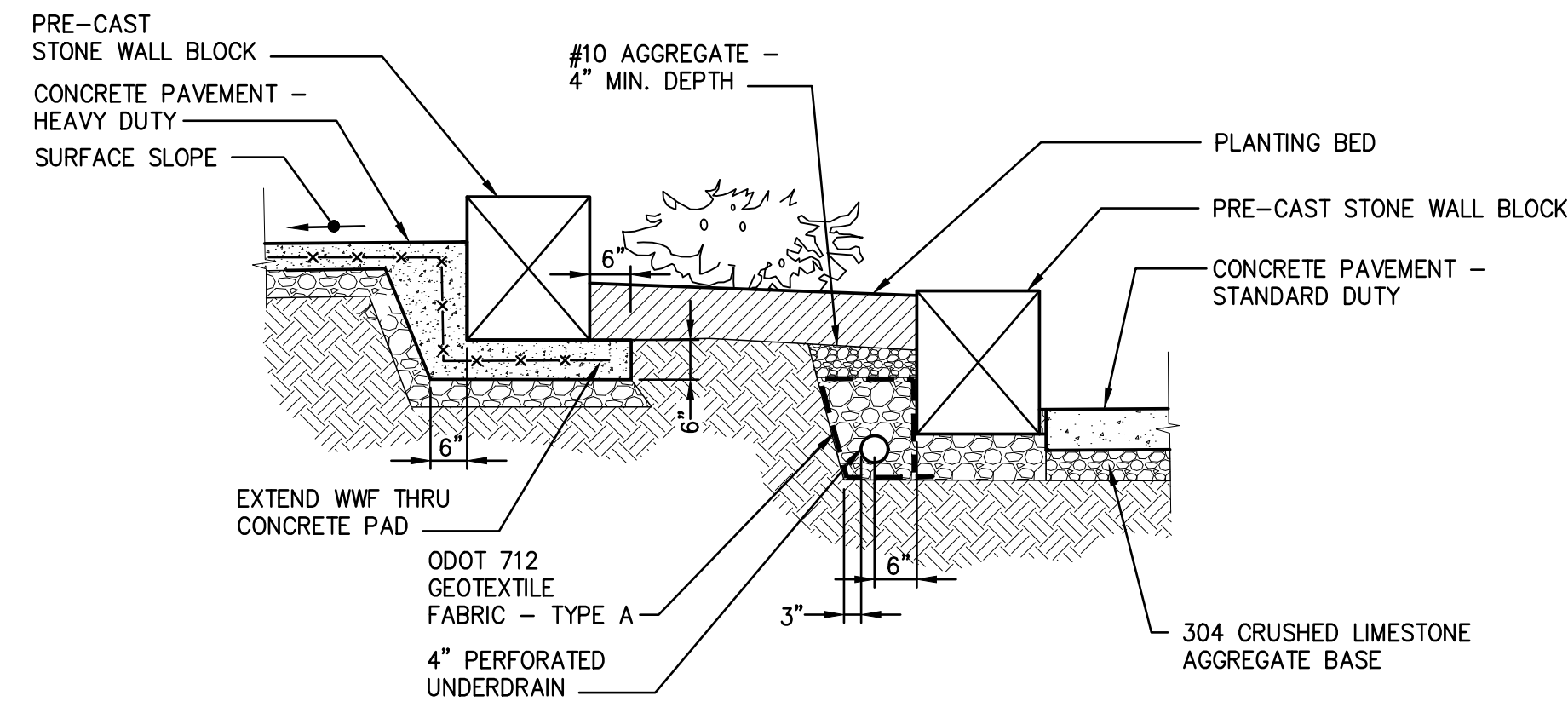
2 SECTION B-B'  
12 NOT TO SCALE



3 SECTION C-C' (STAGE STEP SECTION)  
12 NOT TO SCALE



4 SECTION D-D' (WALL BLOCK STEP @ DRIVE SECTION)  
12 NOT TO SCALE



5 SECTION E-E' (WALL BLOCK @ DRIVE SECTION)  
12 NOT TO SCALE



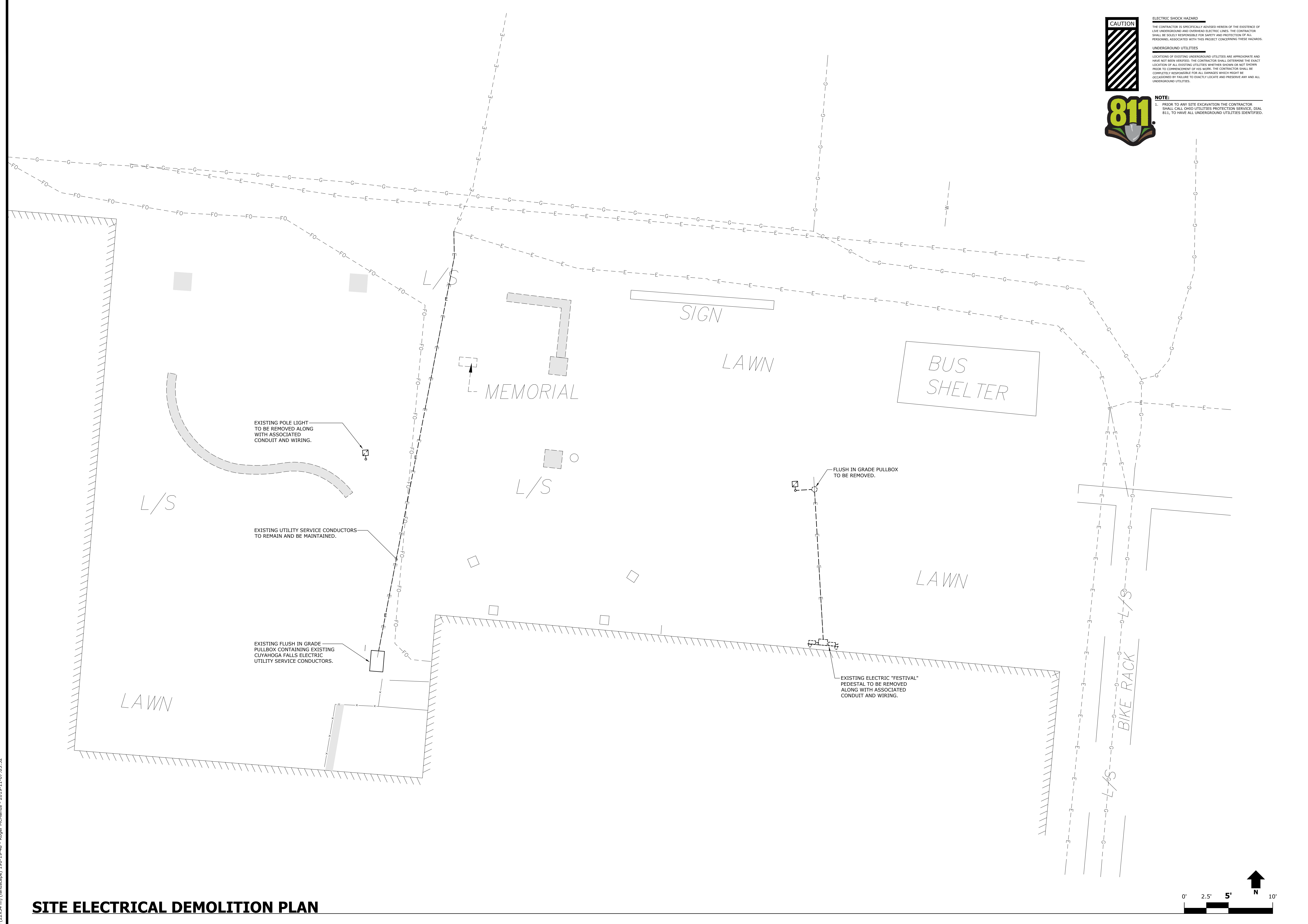
REVISIONS		
Δ	DATE	DESCRIPTION

PROJECT NO.: 19-00316-010  
DRAWN BY: RB, KEH  
CHECKED BY: RB  
DATE ISSUED: 2019-11-09

CONSTRUCTION  
DETAILS - SECTIONS

E:\CUYAHOGA FALLS\CITY OF 19-00316-010 FRONT STREET CORNER PLAZA\CAD\2TYP 19-00316-010 - 11.8.2019 3:27:16 PM

d:\22x34.m (landscape) 190-19-48 - Roger McManus - 2019-11-07\03152



**CAUTION**

**ELECTRIC SHOCK HAZARD**

THE CONTRACTOR IS SPECIFICALLY ADVISED HEREIN OF THE EXISTENCE OF LIVE UNDERGROUND AND OVERHEAD ELECTRICAL LINES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY AND PROTECTION OF ALL PERSONNEL ASSOCIATED WITH THIS PROJECT CONCERNING THESE HAZARDS.

**UNDERGROUND UTILITIES**

LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND HAVE NOT BEEN VERIFIED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES WHETHER SHOWN OR NOT SHOWN PRIOR TO COMMENCEMENT OF HIS WORK. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR ALL DAMAGES WHICH MIGHT BE OCCURRED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

**NOTE:**

1. PRIOR TO ANY SITE EXCAVATION THE CONTRACTOR SHALL CALL OHIO UTILITIES PROTECTION SERVICE, DIAL 811, TO HAVE ALL UNDERGROUND UTILITIES IDENTIFIED.

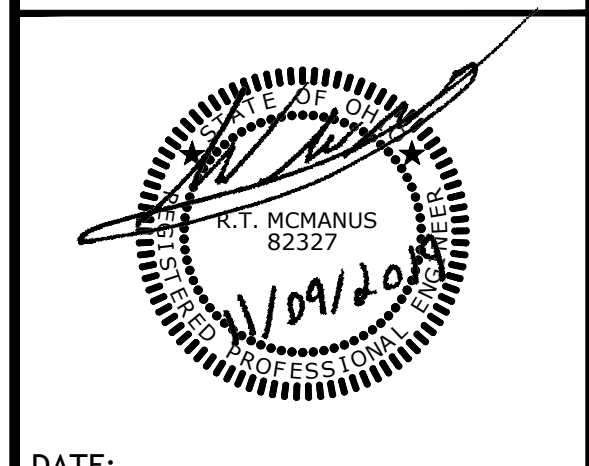
**811**

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

**pta engineering**  
275 Springside Dr., Suite 300  
Akron, Ohio 44333  
Phone: 330-666-3702  
ptaengineering.com

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

**FRONT STREET CORNER  
PLAZA  
CITY OF CUYAHOGA FALLS**



DATE: \_\_\_\_\_

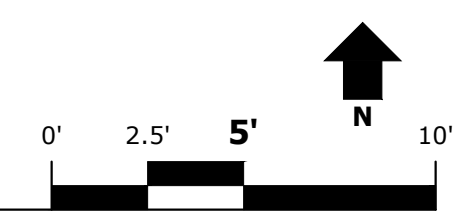
REVISIONS		
NO.	DATE	DESCRIPTION

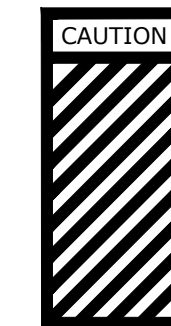
PROJECT NO.: 19-00316-010  
DRAWN BY: PTA INC  
CHECKED BY: R.T.M.  
DATE ISSUED: 2019-11-09

**SITE ELECTRICAL DEMOLITION**

**E1**

**SITE ELECTRICAL DEMOLITION PLAN**



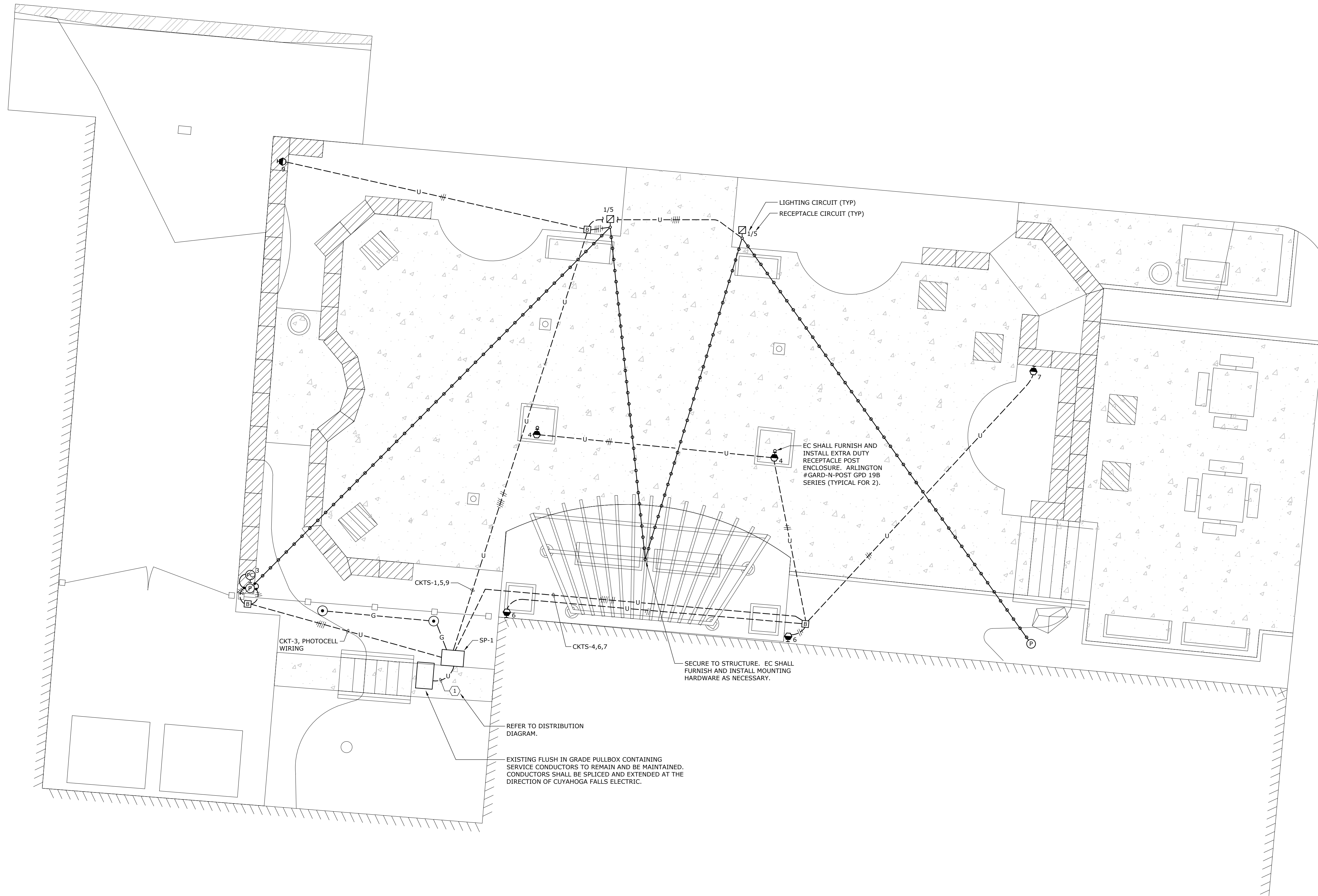


**ELECTRIC SHOCK HAZARD**  
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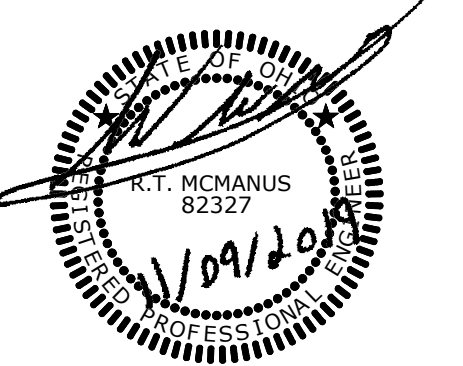
**UNDERGROUND UTILITIES**  
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**NOTE:**  
1. PRIOR TO ANY SITE EXCAVATION THE CONTRACTOR SHALL CALL OHIO UTILITIES PROTECTION SERVICE, DIAL 811, TO HAVE ALL UNDERGROUND UTILITIES IDENTIFIED.



**FRONT STREET CORNER  
PLAZA  
CITY OF CUYAHOGA FALLS**



DATE:

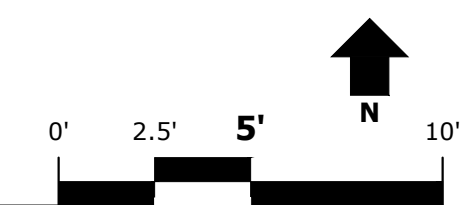
REVISIONS	
DATE	DESCRIPTION

PROJECT NO.: 19-00316-010  
DRAWN BY: PTA INC  
CHECKED BY: R.T.M.  
DATE ISSUED: 2019-11-09

**SITE ELECTRICAL REVISIONS**

**E2**

**SITE ELECTRICAL REVISIONS**

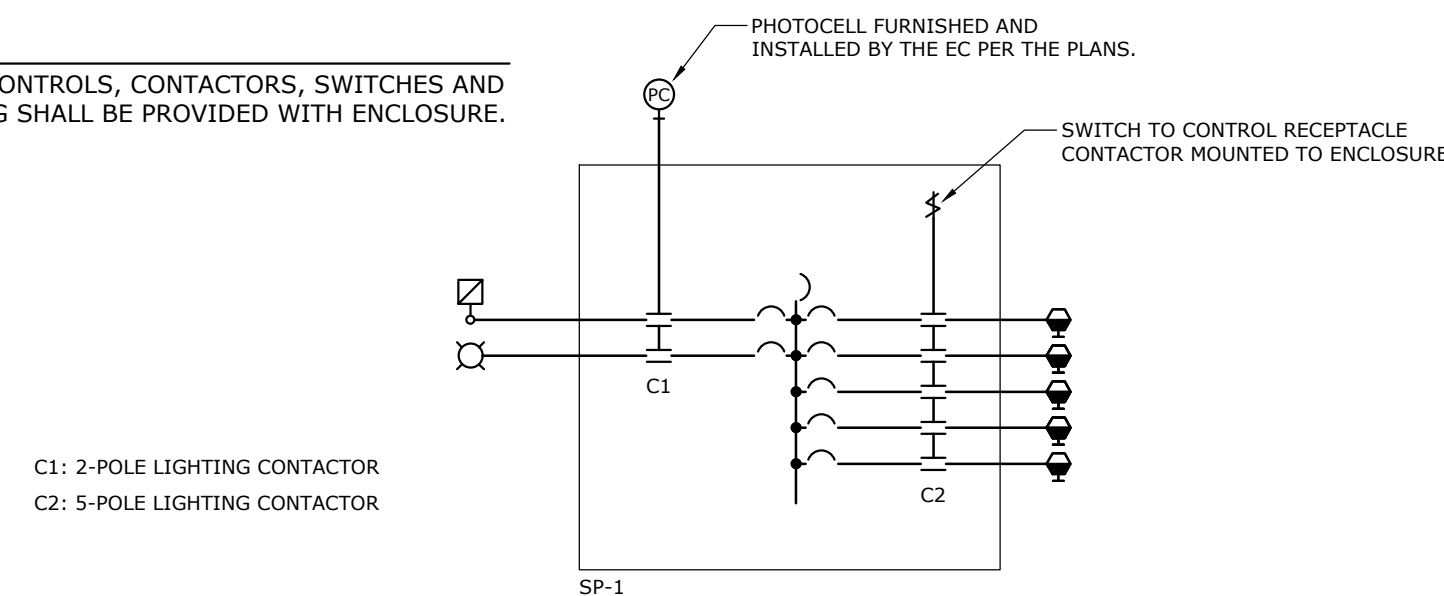


**SYMBOLS**

- EXISTING LIGHT POLE TO BE REMOVED ALONG WITH ASSOCIATED WIRING.
- EXISTING CONDUIT AND WIRING TO BE REMOVED.
- EXTERIOR POLE MOUNTED FIXTURE ASSEMBLY CONSISTING OF ONE 20-1/2" ROUND X 21-3/4" HIGH LUMINAIRE WITH DIE CAST ALUMINUM HOUSING, 8475 LUMENS, 94 WATTS, 4500K COLOR TEMPERATURE, TYPE 5 OPTICS, SAG GLASS LENS, 120/277V DRIVER, AND BLACK FINISH. MOUNT ON 5" FLUTED 14'-0" HIGH ALUMINUM POLE WITH .250 THICK WALL, HANDHOLE/ACCESS DOOR, BLACK FINISH, 3" DIAMETER CANDY CANE FIXTURE MOUNT, 1'-8" LONG 7/8" DIAMETER BANNER MOUNTS AT 12'-0" AFG AND 9'-0" AFG, (2) 12" LONG DOUBLE HOOKED PLANTER ARMS AT 8'-0" AFG, LOW PROFILE DUPLEX GFCl RECEPTACLE WITH IN USE COVER AT 14'-0" AFG, AND ALL MOUNTING HARDWARE, ANCHOR BOLTS, ETC REQUIRED TO PROVIDE A COMPLETE INSTALLATION. FURNISH A REINFORCED "FINISH-FREE" CONCRETE BASE. FIXTURE SHALL MATCH EXISTING FIXTURE LOCATED ON FRONT STREET. STERNBERG LIGHTING #1-1940LED/SG/R3-CC3693/EZ/7700RFP5-16AG/6ARC45T5/MDL/1-GFI/LPIUC/DBA/DHPA/BK.
- EXTERIOR STRING LIGHT FIXTURE CONSISTING OF 2" ROUND, 2W, 2700K COLOR TEMPERATURE, FROSTED LED LAMPS SPACED AT 12" ON CENTER FOR ENTIRE RUN OF STRING LIGHTS. PROVIDE LENGTH OF FIXTURES TO COMPLETE SPAN FROM END TO END INCLUDING LOW SPOTS BETWEEN ANCHOR POINTS. FURNISH AND INSTALL AIRCRAFT CABLE AND ASSOCIATED MOUNTING HARDWARE REQUIRED FOR COMPLETE INSTALLATION. SECURE AIRCRAFT CABLE AT EACH ANCHOR POINT WITH 1-BOLTS SIZED FOR THE WEIGHT LOAD OF THE ENTIRE RUN OF FIXTURES. SECURE STRING LIGHTS TO AIRCRAFT CABLE AT MINIMUM ON 6' CENTERS. HARDWARE FIXTURE WITH WEATHERPROOF CONNECTIONS AT THE POLE CONTAINING THE POWER CONDUCTORS. MOUNT AT 10'-0" AFG. CELESTIAL LIGHTING #HYA-STL SERIES.
- 10'-0" HIGH 4" STRAIGHT ALUMINUM SQUARE POLE WITH 0.188 THICK WALL AND BOTTOM AND TOP HANDHOLES, FULL BASE OVER, TOP COVER, BLACK FINISH, AND ALL MOUNTING HARDWARE, ANCHOR BOLTS, ETC REQUIRED TO PROVIDE COMPLETE INSTALLATION. FURNISH AND INSTALL A 6" HIGH REINFORCED "FINISH-FREE" CONCRETE BASE PER THE DETAILS. INSTALL WEATHERPROOF SEAL AROUND ALL POLE PENETRATIONS. EATON LIGHTING #SSA SERIES.
- 120V REMOTE EXTERIOR WALL MOUNTED LINE VOLTAGE PHOTOCELL. TORK #2001 SERIES OR EQUAL BY INTERMATIC. MOUNT AT TOP OF 10'-0" POLE.
- 20 AMP DUPLEX WEATHER RESISTANT GROUNDING RECEPTACLE WITH INTEGRAL GFCl. HUBBELL #GFR20. SURFACE MOUNT IN "DEEP" SINGLE GANG CAST BOX AT 36" ABOVE FINISHED GRADE WITH METALLIC WEATHERPROOF "WET WHILE IN-USE" COVER. INSTALL SELF LAMINATING LABEL (CLEAR W/BLACK LETTERS) ON COVERPLATE TO IDENTIFY BRANCH PANEL AND CIRCUIT NUMBER.
- 3/4" X 10'-0" COPPER CLAD GROUND ROD FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. LOCATE ROD TO MISS BUILDING FOOTERS. DRIVE TOP OF ROD LEVEL WITH TOP OF FOOTERS. ALL CONNECTIONS SHALL BE MADE BY CADWELD.
- 6" X 8" X 6" DEEP POLYMER CONCRETE BOX WITH OPEN BOTTOM, SKID RESISTANT COVER, FOUR STAINLESS STEEL BOLTS, AND ELECTRIC LOGO (QUAZITE #PC SERIES OR EQUAL BY SYNERTech) INSTALL FLUSH WITH FINISHED GRADE.
- PVC-80 CONDUIT INSTALLED AT 24" MINIMUM BELOW FINISHED GRADE. SIZE TO BE 1", UNLESS NOTED OTHERWISE. QUANTITY OF #10 THWN CONDUCTORS INDICATED BY HASH MARKS UNLESS SPECIFICALLY NOTED OTHERWISE. SHORT HASH MARK INDICATES A GREEN INSULATED COPPER GROUND CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250-122. INSTALL WARNING RIBBON 12" ABOVE CONDUIT.
- ELECTRICAL FEEDER ROUTED IN PVC-80 CONDUIT INSTALLED 36" MINIMUM BELOW FINISHED GRADE. INSTALL WARNING RIBBON 12" ABOVE CONDUIT. CONDUIT AND CONDUCTOR SIZE PER THE DISTRIBUTION DIAGRAM.
- #6 AWG BARE STRANDED GROUNDING ELECTRODE UNLESS NOTED OTHERWISE. DIRECT BURY BELOW FINISHED GRADE.

**NOTE:**

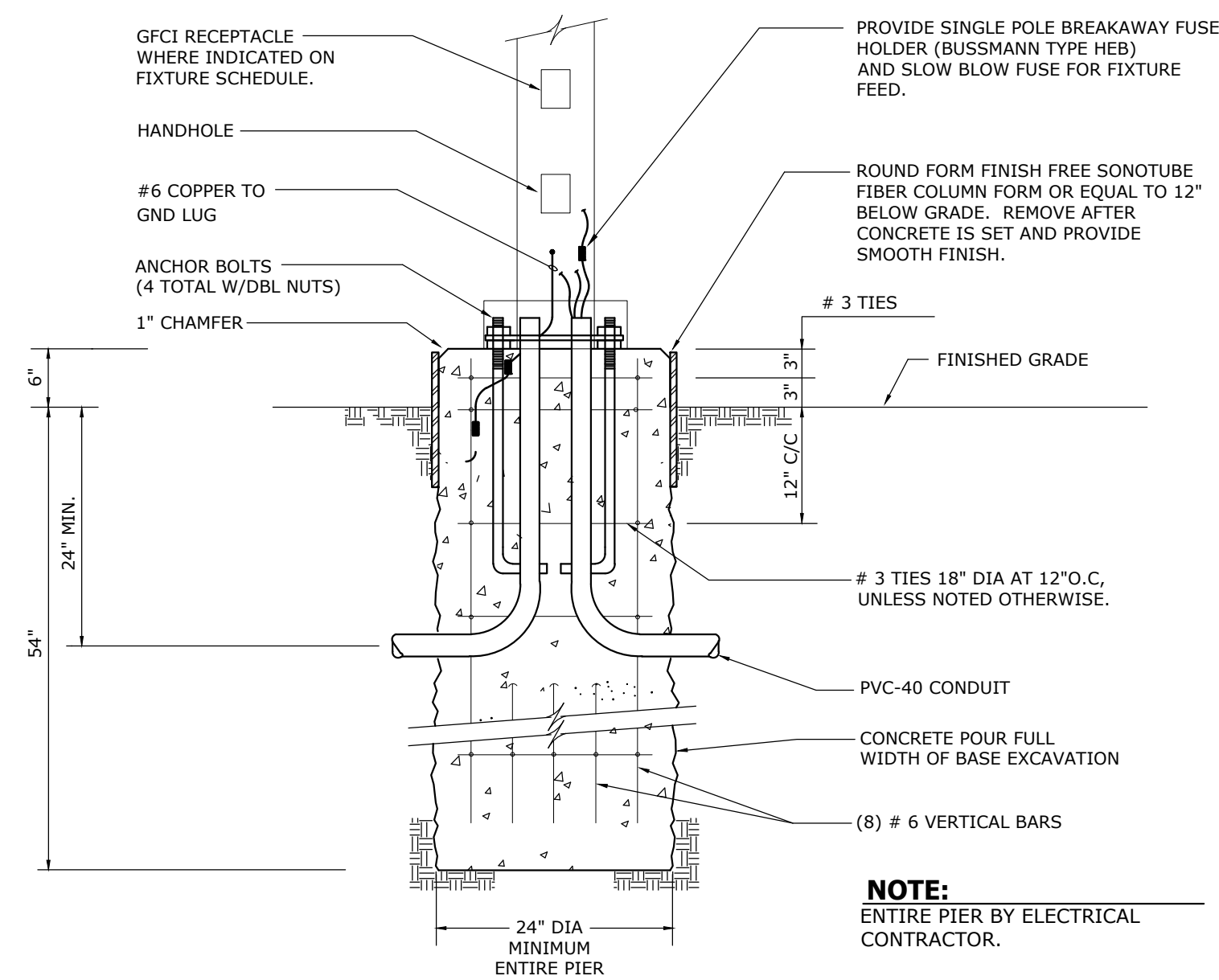
1. SP-1 CONTROLS, CONTACTORS, SWITCHES AND WIRING SHALL BE PROVIDED WITH ENCLOSURE.



**SP-1 CONTROL DIAGRAM**

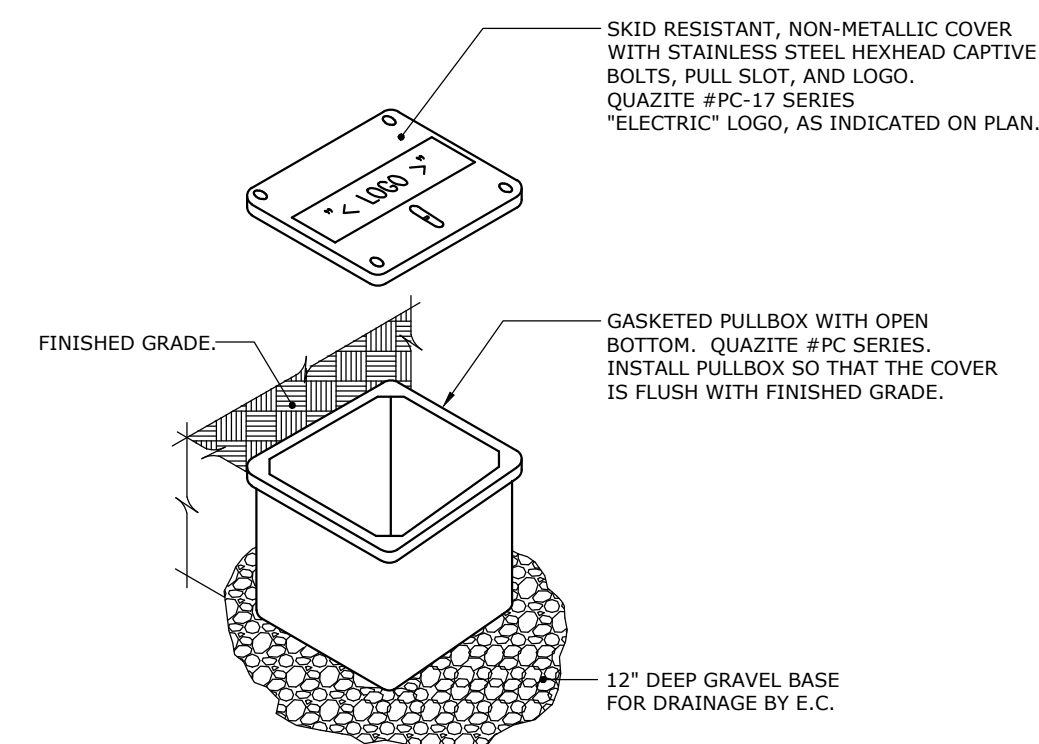
NOT TO SCALE

PANEL "SP-1":										100A, 240/120V, 1-PHASE, 3-WIRE, 100A3P MAIN, INTEGRAL TVSS (SURFACE MOUNTED)									
LOAD										REMARK:									
CKT	BKR	LTG (VA)	REC	MISC (VA)	DESCRIPTION	PHASE	CKT	BKR	LTG (VA)	REC	MISC (VA)	DESCRIPTION							
1	20A1P	200			POLE LIGHTS	A	2	20A1P				CONTROL POWER							
3	20A1P	300			BISTRO LIGHTS	B	4	20A1P		2		TREE PLANTER RECEPTACLES							
5	20A1P		2		POLE LIGHT RECEPTACLES	C	6	20A1P		2		STAGE RECEPTACLES							
7	20A1P		1		EAST PLANTER RECEPTACLE	A	8	20A1P											
9	20A1P		1		WEST PLANTER RECEPTACLE	B	10	20A1P											
11	20A1P					C	12	20A1P											
13	20A1P					A	14	20A1P											
15	20A1P					B	16	20A1P											
17	20A1P					C	18	20A1P											
SUB-TOTAL		500	720	0	CONNECTED LOAD					0	720	0							
FEATURES:										LOAD TOTAL									
HINGED FRONT TRIM					COPPER NEUTRAL BUS					1940									
METAL DIR. FRAME					COPPER GROUND BAR														
TYPED DIRECTORY CARD					MOUNTED IN SP-1 ENCLOSURE														



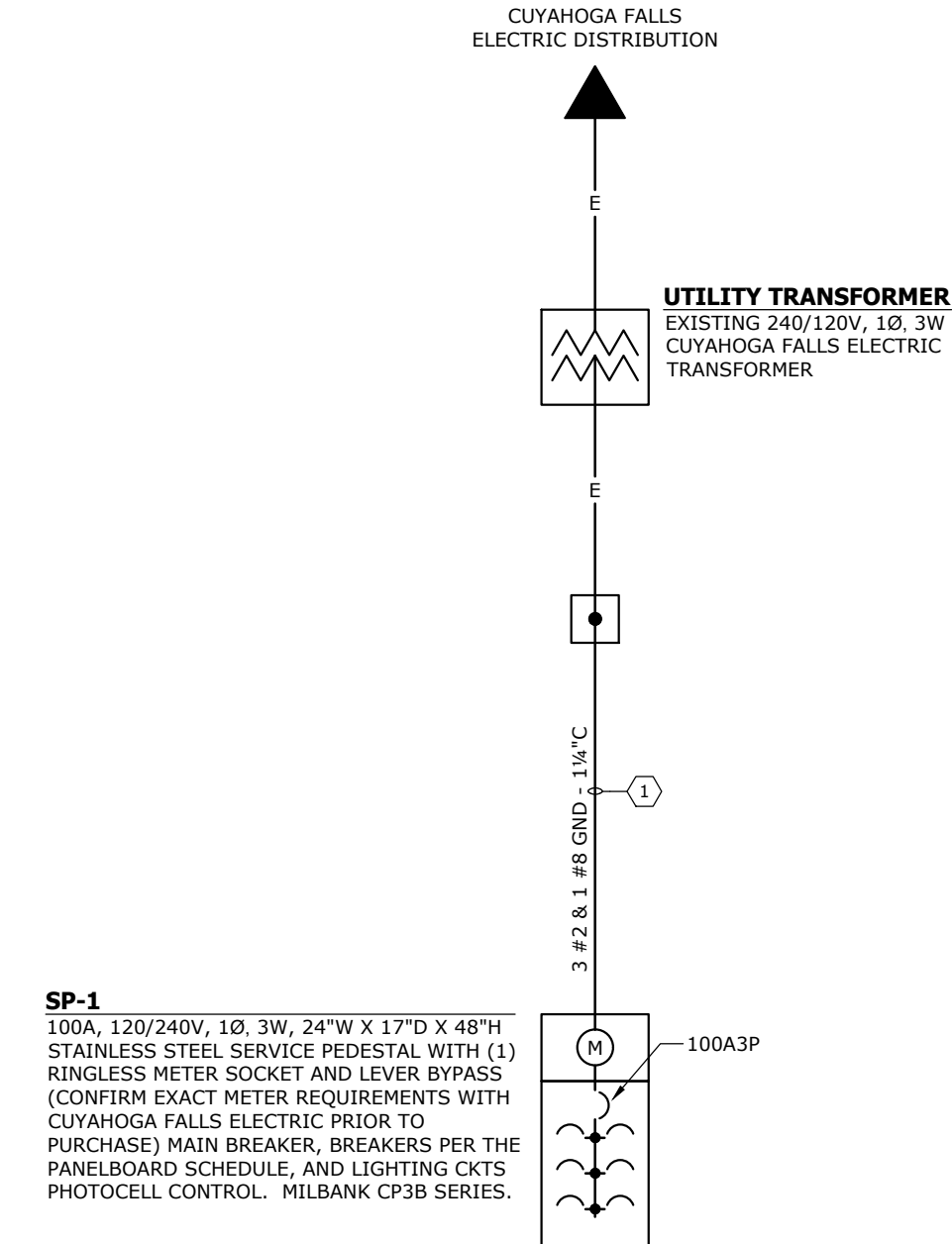
**6" POLE BASE DETAIL**

NOT TO SCALE



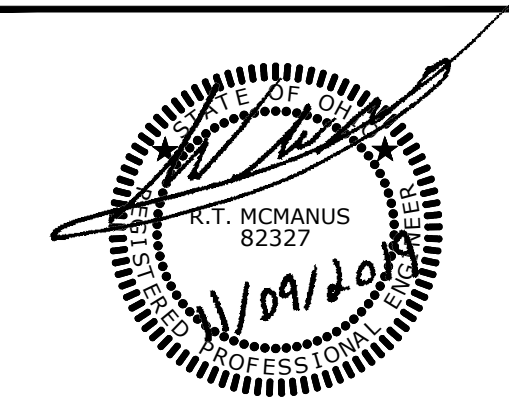
**EXTERIOR IN GRADE JUNCTION BOX DETAIL**

NOT TO SCALE



**DISTRIBUTION DIAGRAM**

NOT TO SCALE



DATE:

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NO.	DATE	DESCRIPTION

PROJECT NO.: 19-00316-010  
DRAWN BY: PTA INC  
CHECKED BY: R.T.M.  
DATE ISSUED: 2019-11-09

ELECTRICAL  
DETAILS

E3

# ELECTRICAL SPECIFICATIONS

## 1. GENERAL PROVISIONS

- A. THIS CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, SUPPLIES, SERVICES, AND SHALL PERFORM ALL OPERATIONS INCLUDING SETTING OF SLEEVES, CUTTING, CHANNELING, AND CHASING NECESSARY FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL WORK ON THIS PROJECT, COMPLETE IN STRICT ACCORDANCE WITH THIS SPECIFICATION AND APPLICABLE DRAWINGS, AND READY FOR USE. THIS WORK INCLUDES ALL ELECTRICAL WORK FROM THE POINT OF SERVICE CONNECTION OR CONNECTIONS TO AND INCLUDING OUTLETS, WIRING DEVICES, LIGHTING FIXTURES, MOTOR TERMINALS, ETC.
  - (1) THE ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL, AND REMOVE TEMPORARY LIGHTING AND POWER SERVICES AS REQUIRED FOR THE COMPLETION OF THE PROJECT.
- B. THIS CONTRACTOR IS INSTRUCTED TO READ CAREFULLY THE SPECIFICATIONS FOR ALL PARTS OF THE WORK, ESPECIALLY THE MECHANICAL TRADES OF THIS CONTRACT AND INCLUDE COSTS FOR WIRING ALL THEIR EQUIPMENT UNLESS SPECIFICALLY EXCEPTED HEREIN.
- C. ALL ITEMS OF LABOR, MATERIAL AND EQUIPMENT NOT SPECIFICALLY MENTIONED HEREIN OR SHOWN ON PLANS, BUT INCIDENTAL TO, OR REQUIRED FOR THE COMPLETE INSTALLATION AND PROPER OPERATION OF THE WORK, SHALL BE FURNISHED AS IF CALLED FOR IN DETAIL BY THE SPECIFICATIONS OR DRAWINGS.

## 2. PERMITS, CODES, INSPECTIONS, AND TESTS

- A. THE ELECTRICAL CONTRACTOR (EC) SHALL SECURE AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED FOR THE PROSECUTION OF ELECTRICAL WORK. ALL PERMITS AND CERTIFICATES OF INSPECTION AND APPROVAL SIGNED BY THE CONTROLLING BUILDING DEPARTMENT SHALL BECOME PROPERTY OF THE OWNER.
- B. ALL WIRING SHALL BE IN COMPLIANCE WITH THE CURRENT EDITION OF THE NATIONAL ELECTRIC CODE, APPLICABLE STATE AND CITY REGULATIONS, AND OSHA. IN CASES OF CONFLICT BETWEEN CODE AND SPECIFICATIONS, THE MORE RESTRICTIVE REQUIREMENTS SHALL GOVERN.
- C. FOLLOWING COMPLETION OF THE ELECTRICAL WORK, FURNISH TO THE OWNER, IN DUPLICATE, CERTIFICATES OF INSPECTION AND APPROVAL BY REGULATORY AGENCIES HAVING JURISDICTION.
  - (1) ARRANGE FOR INSPECTION CERTIFICATION PRIOR TO SUBMITTING FINAL REQUEST FOR PAYMENT. PAY ALL FEES IN CONNECTION WITH SUCH INSPECTIONS.
  - (2) IMMEDIATELY CORRECT ANY WORK FOUND AT VARIANCE WITH THESE SPECIFICATIONS, THE NATIONAL ELECTRICAL CODE, OR REQUIREMENTS OF GOVERNING REGULATORY AGENCIES.
  - (3) DEMONSTRATE, BY TEST, THAT ALL WORK COMPLIES WITH THE STATED STANDARDS. TESTS WILL INCLUDE: OPERATION OF LIGHTS AND EQUIPMENT, CONTINUITY OF CONDUIT SYSTEM, GROUNDING RESISTANCES AND INSULATION RESISTANCES ON NOT MORE THAN 10 REPRESENTATIVE CIRCUITS AND ANY OTHER CIRCUITS JUSTIFYING SUCH TESTING, AND ANY OTHER TESTING IDENTIFIED IN THIS SPECIFICATION. LABOR AND EQUIPMENT FOR PERFORMING TESTS SHALL BE SUPPLIED AS PART OF THE WORK UNDER THIS DIVISION.

## 3. VISIT TO THE SITE

- A. THE CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND BECOME FAMILIAR WITH ALL CONDITIONS AFFECTING THE WORK. THE SUBMISSION OF A PROPOSAL SHALL PRESUPPOSE KNOWLEDGE OF ALL SUCH CONDITIONS.

## 4. PROTECTION

- A. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION FROM DIRT AND WATER DURING CONSTRUCTION NECESSITATED BY ELECTRICAL WORK. PROTECTION METHODS ARE SUBJECT TO APPROVAL BY THE CONSTRUCTION MANAGER AND/OR THE ARCHITECT.

## 5. EQUIPMENT AND EQUIPMENT IDENTIFICATION

- A. ALL EQUIPMENT AND DEVICES SHALL BE NEW AND SHALL CONFORM TO NEMA AND UNDERWRITERS' LABORATORIES STANDARDS. WHERE SPECIFICATIONS DESCRIBE, OR PLANS SHOW, MATERIALS OR EQUIPMENT OF HIGHER QUALITY THAN REQUIRED BY CODE AND LOCAL RULING, THE DRAWINGS AND SPECIFICATIONS SHALL GOVERN THE QUALITY OF THE MATERIAL OR EQUIPMENT.
- B. THE CONTRACTOR SHALL SUBMIT PROOF, IF REQUESTED BY THE OWNER, THAT THE MATERIALS, APPLIANCES, EQUIPMENT OR DEVICES THAT ARE FURNISHED AND INSTALLED UNDER THIS CONTRACT MEET THE REQUIREMENTS OF THE UNDERWRITERS' LABORATORIES, INC., AS REGARDING FIRE AND CASUALTY HAZARDS. THE LABEL OF OR LISTING BY THE UNDERWRITERS' LABORATORIES, INC. WILL BE ACCEPTED AS CONFORMING WITH THIS REQUIREMENT. IN LIEU OF THE LABEL OR LISTING, THE CONTRACTOR MAY SUBMIT INDEPENDENT PROOF SATISFACTORY TO THE ENGINEER THAT THE MATERIALS, APPLIANCES OR DEVICES CONFORM TO THE UNDERWRITERS' LABORATORIES, INC. PUBLISHED STANDARDS AND TESTING METHODS. UNDERWRITERS' LABORATORIES, INC. AND ITS PUBLICATIONS WILL BE REFERRED TO HEREINAFTER BY THE ABBREVIATION UL, WITH OR WITHOUT ADDITIONAL IDENTIFYING SYMBOLS.
- C. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A SYSTEM OF NAMEPLATES DESIGNED TO IDENTIFY EACH PIECE OF ELECTRICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO PANELBOARDS BRANCH CIRCUIT PANELBOARDS, AND CONTACTORS.
  - (1) NAMEPLATES SHALL BE ENGRAVED MICARTA BLACK WITH WHITE LETTERS FOR NORMAL POWER SOURCE UNLESS NOTED OTHERWISE ON THE DRAWINGS. NAMEPLATES SHALL BE ADHERED TO A CLEAN FLAT SURFACE OR MECHANICALLY FASTENED TO THE EQUIPMENT. SELF LAMINATING OR HAND WRITTEN LABELS ARE NOT ACCEPTABLE.
- D. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL IDENTIFYING LABELS, WHERE NECESSARY OR AS DIRECTED BY THE OWNER, FOR ALL PUSHBUTTONS, SELECTOR SWITCHES, KEY SWITCHES, TOGGLE SWITCHES, MANUAL MOTOR STARTERS, RECEPTACLES, SPECIAL OUTLETS, ETC.
  - (1) LABELS SHALL BE SELF LAMINATING WHITE WITH BLACK LETTERS, UNLESS NOTED OTHERWISE ON THE DRAWINGS, AND SHALL BE ADHERED TO A CLEAN FLAT SURFACE.

## 6. GUARANTEE

- A. THE ELECTRICAL CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE YEAR (FROM THE DATE OF OWNER ACCEPTANCE) THAT ALL WORK AND EQUIPMENT WILL REMAIN FREE FROM ALL DEFECTS IN WORKMANSHIP AND MATERIALS, AND THAT IT WILL COMPLY WITH ALL THE SPECIFIC REQUIREMENTS OF THE SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS GOVERNING THE WORK.
- B. ALL WORK FOUND BY THE ENGINEER TO BE DEFECTIVE WILL BE REPLACED WITH NEW WORK MEETING ALL THE REQUIREMENTS OF THE CONTRACT. THE ELECTRICAL CONTRACTOR WILL BEAR ALL COSTS OF SUPPLYING SUCH NEW WORK, AND INSTALLING AND FINISHING SAME, AND WILL ASSUME ALL COSTS FOR REPLACING OTHER WORK DAMAGED BY THE REMOVAL AND REPLACEMENT OF ANY OF THE WORK. THE ELECTRICAL CONTRACTOR WILL BEAR ALL COSTS FOR FREIGHT, DRAYAGE AND DEMURRAGE, AND ALL LABOR IN CONNECTION THEREWITH.

## 7. EXCAVATING, TRENCHING, BACKFILLING, AND RESTORATION:

- A. FURNISH MATERIALS, TOOLS, LABOR, AND SUPERVISION NECESSARY TO PROVIDE ALL EXCAVATING, TRENCHING, AND BACKFILLING REQUIRED FOR THE PROPER INSTALLATION OF ELECTRICAL EQUIPMENT AND WIRING.
- B. EXACT ROUTING OF TRENCHING SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND APPROVED, IN ADVANCE, BY THE CONSTRUCTION MANAGER AND/OR THE ARCHITECT.
- C. DRAWINGS INDICATE THE APPROXIMATE DESIRED POSITION OF EQUIPMENT AND ROUTING OF DUCTS, PIPE AND CONDUITS. IF FIELD CONDITIONS ARE ENCOUNTERED WHICH MAKE ARRANGEMENTS INDICATED IMPOSSIBLE OR IMPRACTICAL, SUBMIT REQUEST FOR DEVIATION IN WRITING TO ENGINEER, WITH DRAWINGS WHERE REQUIRED TO CLARIFY THE REQUEST. DO NOT PROCEED UNTIL THE REQUEST HAS BEEN ACCEPTED IN WRITING.
- D. INVESTIGATING, LOCATING, MARKING, AND PROTECTING EXISTING UNDERGROUND FACILITIES, PUBLIC AND PRIVATE, SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- E. THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AT 800-362-2764, AND OWNERS OF UTILITY FACILITIES WHO ARE NOT MEMBERS OF OUPS, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
- F. ANY DAMAGE TO UNDERGROUND FACILITIES CAUSED BY THE ELECTRICAL CONTRACTOR SHALL BE REPAIRED AT NO COST TO THE OWNER.
- G. CLEARANCES OF UNDERGROUND FACILITIES SHALL BE AS FOLLOWS:
  - (1) MAINTAIN MINIMUM CLEARANCE OF 12" VERTICAL AND 36" HORIZONTAL BETWEEN PROPOSED UNDERGROUND FACILITIES AND NEW AND/OR EXISTING WATER LINES.
  - (2) MAINTAIN MINIMUM CLEARANCE OF 18" VERTICAL AND 18" HORIZONTAL BETWEEN PROPOSED UNDERGROUND FACILITIES AND NEW AND/OR EXISTING SANITARY SEWER LINES.
  - (3) MAINTAIN MINIMUM CLEARANCE OF 12" VERTICAL AND 12" HORIZONTAL BETWEEN PROPOSED AND EXISTING UNDERGROUND FACILITIES NOT LISTED ABOVE.
- H. THE ELECTRICAL CONTRACTOR SHALL PERFORM ALL EXCAVATING REQUIRED FOR LIGHT POLE BASES, UNDERGROUND WIRING, CONDUIT, AND DUCT BANKS.
  - (1) TRENCHES SHALL BE OPENED IN STRAIGHT LINES AND BOTTOMED OUT AT LEAST 4" BELOW CONDUITS OR DUCTS. MINIMUM DEPTH AS INDICATED SHALL BE MAINTAINED BETWEEN TOP OF LARGEST CONDUIT OR DUCT AND FINISH GRADE.
  - (2) HEAVY STEEL PLATING SHALL BE INSTALLED ACROSS ALL TRENCHES WHERE THEY TRAVERSE ROADWAYS, DRIVES, AND LOT AISLES TO MAINTAIN EXISTING TRAFFIC PATTERNS THROUGHOUT THE CONSTRUCTION PERIOD.
  - (3) CARE SHALL BE TAKEN IN EXCAVATING THAT WALLS, FOOTINGS, AND ADJACENT LOAD BEARING SOILS ARE NOT DISTURBED IN ANY WAY, EXCEPT WHERE LINES MUST CROSS UNDER A FOOTING. WHERE A LINE MUST PASS UNDER A FOOTING, THE CROSSING SHALL BE MADE BY THE SMALLEST POSSIBLE TRENCH TO ACCOMMODATE THE DUCT OR CONDUIT.

- (4) EXCAVATIONS SHALL BE KEPT FREE FROM WATER BY PUMPING IF NECESSARY. NO GREATER LENGTH OF TRENCH SHALL BE LEFT OPEN, IN ADVANCE OF CONDUIT LAYING OR DUCT INSTALLATION, THAN THAT WHICH IS AUTHORIZED OR DIRECTED BY THE CONSTRUCTION MANAGER AND/OR THE ARCHITECT.
- (5) EXISTING EXCAVATED CONCRETE AND ASPHALT SHALL BE REMOVED FROM THE JOB SITE BY THE ELECTRICAL CONTRACTOR.
- (6) EXISTING EXCAVATED SUB-BASE MATERIAL, WHERE SUITABLE, SHALL BE PERMITTED TO BE USED FOR BACKFILLING. UNSUITABLE AND SURPLUS SUB-BASE MATERIAL SHALL BE REMOVED FROM THE JOBSITE BY THE ELECTRICAL CONTRACTOR.
- (7) CONTRACTOR SHALL CUT ANY INTERFERING TREES, REMOVE ALL STUMPS, ROCKS, ETC. IN THE LINE OF THE EXCAVATION. APPROVAL OF THE ARCHITECT SHALL BE OBTAINED BEFORE ANY TREE IS REMOVED.
- (8) ANY SHRUBBERY IN LINE OF EXCAVATION SHALL BE REMOVED WITH A BALL OF DIRT AND REPLACED AT COMPLETION OF EXCAVATION.
- (9) ROOTS SHALL BE REMOVED TO A LEVEL OF EIGHTEEN (18) INCHES BELOW FINISHED GRADES AND DEEPER AS REQUIRED FOR DUCT RUNS, MANHOLES, AND LIGHT POLE BASES. NO ROOTS SHALL BE ALLOWED TO REMAIN UNDER THE WORK.

## 1. THE ELECTRICAL CONTRACTOR SHALL PERFORM ALL BACKFILLING ASSOCIATED WITH THE ABOVE DESCRIBED EXCAVATION WORK.

- (1) BACKFILL ALL TRENCHES AND EXCAVATIONS USING SUITABLE EXCAVATED MATERIALS AS DEFINED IN THE STATE DEPARTMENT OF TRANSPORTATION ROADWAY EXCAVATION AND EMBANKMENT SPECIFICATION (ODOT 203) UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. BACKFILLING OF TRENCHES SHALL COMMENCE IMMEDIATELY AFTER WORK HAS BEEN INSPECTED.
- (2) BACKFILLING SHALL COMMENCE IMMEDIATELY AFTER WORK HAS BEEN INSPECTED AND SHALL PROGRESS AS RAPIDLY AS THE TESTING AND ACCEPTANCE OF THE FINISHED SECTIONS OF THE WORK WILL PERMIT.
- (3) BACKFILL ABOUT THE STRUCTURES SHALL BE PLACED, WHEN PRACTICAL, AS THE WORK OF CONSTRUCTION PROGRESSES. BACKFILLING ON OR AGAINST CONCRETE WORK SHALL COMMENCE ONLY WHEN DIRECTED.
- (4) PRIOR TO BACKFILLING THE TRENCH, CONDUITS SHALL EITHER BE BACKFILLED AND COMPACTED, OR ENCASED USING ONE OF THE FOLLOWING METHODS, AS REQUIRED PER THE DRAWINGS.
  - (A) PLACE FINE AGGREGATE CONSISTING OF NATURAL SAND OR #8 GRANULAR MATERIAL (3/8" DIAMETER OR LESS, ODOT 703) AROUND RACEWAYS AND COMPACT MATERIAL FIRMLY AROUND CONDUITS TO A DEPTH OF NOT LESS THAN FOUR (4) INCHES OVER THE TOP OF THE DUCT.
  - (B) IN LIEU OF FINE AGGREGATE, THE CONTRACTOR MAY PROVIDE NONMETALLIC TIES TO PREVENT FLOATING OF CONDUITS AND ENCASEMENT USING LOW STRENGTH MORTAR BACKFILL (ODOT 613) CONSISTING OF A FLOWABLE CONCRETE MIX. THE CONCRETE MIX SHALL HAVE A COMPRESSIVE STRENGTH BETWEEN 50 AND 100 PSI AT 28 DAYS, WHICH WILL ALLOW FUTURE EXCAVATION.
  - (C) WHERE DUCT BANKS ARE INDICATED TO BE CONCRETE ENCASED, PROVIDE NONMETALLIC TIES TO PREVENT FLOATING OF CONDUITS, USE CARE IN PLACING CONCRETE TO NOT DAMAGE OR DISLOCATE RACEWAYS, AND LIBERALLY AND CONTINUOUSLY HAND SPADE TO INSURE THERE ARE NOT VOIDS BETWEEN AND UNDER CONDUITS. CONCRETE SHALL BE CLASS C (ODOT 499) WITH AN AVERAGE COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. MECHANICAL VIBRATORS ARE NOT ACCEPTABLE.
- (5) TRENCH BACKFILLING AND BACKFILL AROUND STRUCTURES SHALL BE COMPACTED THOROUGHLY IN LAYERS AND SHALL BE BROUGHT UP TO WITHIN SIX (6) INCHES OF FINISHED GRADES.
  - (A) BACKFILL UNDER ROADWAYS, DRIVES, AND PARKING AREAS SHALL BE BANK RUN GRAVEL OR APPROVED GRANULAR MATERIAL (IE, SAND) AND SHALL BE INSTALLED IN 6" LAYERS, AND TAMPED AFTER EACH LAYER.
  - (B) BACKFILL UNDER BUILDING WALLS, AND/OR FOOTERS SHALL BE CONCRETE OF THE SAME STRENGTH AS WALLS OF FOOTERS.
  - (C) BACKFILL IN GRASSY AREAS SHALL BE CLEAN AND FREE FROM VEGETATIVE MATTER, STICKS, ROCKS AND REFUSE.

## 1. ALL RESTORATION WORK SHALL BE PERFORMED BY THE ELECTRICAL CONTRACTOR IN FULL COMPLIANCE WITH ALL CITY REGULATIONS (WHERE APPLICABLE), AND ARCHITECT'S DIRECTIVES.

- (1) CONCRETE AREAS SHALL BE REPLACED TO MATCH.
- (2) CONCRETE WALKS SHALL BE REMOVED IN FULL SECTIONS AND REPLACED TO MATCH.
  - (A) SIDEWALKS SHALL BE 5" THICK WITH 6" BY 6" BY 10/10 GAUGE WELDED WIRE REINFORCEMENT, CROSS SLOPE, AND TEXTURED FINISH.
  - (B) CONTROL JOINTS SHALL BE 8'-0" ON CENTER AND EXPANSION JOINTS SHALL BE AS RECOMMENDED PER AMERICAN CONCRETE INSTITUTE STANDARDS.
- (3) ASPHALT AREAS SHALL BE REPLACED WITH 5" MINIMUM ASPHALT CONCRETE SURFACE AS DEFINED IN THE STATE DEPARTMENT OF TRANSPORTATION ROADWAY ASPHALT CONCRETE SPECIFICATION (ODOT 441).
  - (A) CONSTRUCTION SHALL BE 2" MINIMUM TYPE 1 ASPHALT CONCRETE WEARING SURFACE WITH 2-3/4" MINIMUM TYPE 2 ASPHALT CONCRETE INTERMEDIATE SURFACE AND 6" MINIMUM (ODOT 301) CRUSHED AGGREGATE BASE.
  - (B) FINISHED ASPHALT SURFACE TO BE GRADED SUCH AS TO AVOID "PONDING" OF SURFACE RAIN WATER.
- (4) GRASSY AREAS SHALL BE FINISHED WITH 8" BEST GRADE TOPSOIL THAT IS FREE OF ALL ROCKS AND DEBRIS, COMPACTED IN LAYERS AND CARRIED TO A CROWN OF APPROX. 6" ABOVE FINISHED GRADE. RAKE TO REMOVE ALL STONES, HEAVILY SEED (FAIRLAWN MIX), AND INSTALL 3" THICK COVER OF STRAW AND BIO-DEGRADABLE GREEN NETTING THAT IS ANCHORED ON ALL SIDES ON 36" CENTERS.
- (5) SHRUBBERY REMOVED DURING EXCAVATION SHALL BE REPLANTED USING BACKFILL MIX AS DEFINED IN ODOT 661. WHERE SHRUBBERY IS INDICATED TO BE MAINTAINED, BUT DOES NOT SURVIVE CONSTRUCTION OR FAILS TO ESTABLISH AFTER REPLANTING, IT SHALL BE REPLACED.

## 8. COORDINATION AND CONDUCT OF WORK

- A. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC, INDICATING GENERAL ARRANGEMENT, APPROXIMATE SIZES, GENERAL LOCATIONS OF EQUIPMENT AND OUTLETS. VERIFY DIMENSIONS IN FIELD; ADJUST TO MANUFACTURER'S SHOP DRAWINGS. DO NOT SCALE DRAWINGS.
  - B. ARCHITECTURAL AND STRUCTURAL DRAWINGS SUPERSEDE ELECTRICAL DRAWINGS. DETERMINE THAT WORK OF THIS DIVISION CAN BE ACCOMMODATED WITHIN SPACES PROVIDED. NOTIFY ARCHITECT OF ANY INTERFERENCES BEFORE STARTING INSTALLATION.
  - C. DETERMINE SIZES, LOCATIONS FOR CHASES, AND OPENINGS NECESSARY FOR INSTALLATION OF ELECTRICAL WORK. COOPERATE WITH OTHER TRADES IN SETTING SLEEVES, INSERTS, AND HANGERS.
  - D. ELECTRICAL CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WORK TO BE PROVIDED BY ALL ELECTRICAL UTILITY COMPANIES.
    - (1) ALL UTILITY COMPANY CHARGES SHALL BE PAID BY OWNER AND EXCLUDED FROM THE ELECTRICAL CONTRACTOR'S PROPOSAL.
    - (2) NOTIFY THE ELECTRICAL ENGINEER OF ANY/ALL DISCREPANCIES OR DEVIATIONS FROM THAT WORK SHOWN ON THE BID DOCUMENTS PRIOR TO EXECUTION OF WORK.
  - E. COORDINATE THIS WORK WITH ALL TRADES. ARRANGE OPERATIONS SO AS NOT TO DELAY INSTALLATION OR COMPLETION OF ANY PARTS OF INTERRELATED WORK SO THAT CONSTRUCTION MAY PROCEED ON SCHEDULE. ARRANGE WORK AND SCHEDULE CONTINUOUS WORK SHIFTS TO PROVIDE MINIMUM POSSIBLE OUTAGE OF ELECTRIC SERVICE.
  - F. DRAWINGS OTHER THAN ELECTRICAL DRAWINGS AND OTHER SECTIONS OF THIS SPECIFICATION MAY SHOW OR SPECIFY ELECTRICALLY OPERATED EQUIPMENT, WIRING DIAGRAMS, ETC. THE CONTRACTOR SHALL EXAMINE ALL SUCH DRAWINGS AND SPECIFICATION SECTIONS TO BECOME FAMILIAR WITH THE CHARACTERISTICS OF AND REQUIRED CONNECTIONS FOR ALL EQUIPMENT FOR WHICH WIRING IS TO BE PROVIDED.
  - G. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER BY FIRST-CLASS MECHANICS. THE CONTRACTOR SHALL PROVIDE ADEQUATE AND COMPETENT SUPERVISION THROUGHOUT CONSTRUCTION.
  - H. CONDUITS, WIRING, AND EQUIPMENT SHALL BE ARRANGED SUBSTANTIALLY AS INDICATED. ANY CHANGE RESULTING IN A SAVINGS IN LABOR OR MATERIAL SHALL BE MADE ONLY IN ACCORDANCE WITH A CONTRACT CHANGE ORDER. DEVIATIONS SHALL BE MADE ONLY WHERE NECESSARY TO AVOID INTERFERENCES AND ONLY AFTER DRAWINGS SHOWING THE PROPOSED DEVIATIONS HAVE BEEN SUBMITTED TO AND APPROVED BY THE ARCHITECT.
  - I. CONSTRUCTION MANAGER AND ARCHITECT RESERVE THE RIGHT TO MAKE REASONABLE CHANGES IN INDICATED LOCATIONS WITHOUT ADDITIONAL COST TO THE OWNER.
- ## 9. REMOVAL AND REARRANGEMENT OF EXISTING WIRING AND ELECTRICAL EQUIPMENT
- A. REMOVE ALL EXISTING WIRING AND ELECTRICAL DEVICES THAT INTERFERE WITH NEW CONSTRUCTION AND ARE NOT NECESSARY TO MAINTAIN SERVICE TO LOADS THAT ARE TO REMAIN.
  - B. RELOCATE AND/OR EXTEND AS REQUIRED, WIRING THAT INTERFERES WITH NEW CONSTRUCTION AND IS ESSENTIAL TO MAINTAIN SERVICE TO LOADS THAT ARE TO REMAIN.
  - C. REMOVE AND/OR RELOCATE THOSE DEVICES SPECIFICALLY INDICATED ON THE DRAWINGS.
  - D. IN THOSE CASES WHERE DEVICES ARE REMOVED, THE ASSOCIATED WIRING THAT WILL NO LONGER BE ACTIVE SHALL BE REMOVED FULL LENGTH BACK TO THE SOURCE OR FIRST ACTIVE JUNCTION POINT.

- E. ELECTRICAL CONTRACTOR SHALL SAFELY DISPOSE OF ALL FLUORESCENT AND HID BALLASTS AND LAMPS IN FULL COMPLIANCE WITH ALL FEDERAL AND STATE EPA REGULATIONS. ELECTRICAL CONTRACTOR SHALL, UNDER THE BASE BID PROPOSAL, PACKAGE, AND DISPOSE OR RECYCLE ALL LAMPS AND BALLASTS REMOVED UNDER THE DEMOLITION PORTION OF THIS CONTRACT.
  - (1) DISPOSAL SHALL BE DONE AT AN EPA APPROVED HAZARDOUS WASTE FACILITY.
  - (2) RECYCLING SHALL BE DONE BY AN EPA APPROVED RECYCLE FACILITY.
  - (3) ELECTRICAL CONTRACTOR SHALL PROVIDE BOTH OWNER AND ARCHITECT WITH COPIES OF ALL LAMP AND BALLAST DISPOSAL/RECYCLE DOCUMENTATION IN ACCORDANCE WITH U.S. EPA AND STATE EPA REGULATIONS.

- F. ALL ELECTRICAL MATERIAL AND DEVICES THAT ARE REMOVED SHALL BE STORED ON THE SITE FOR SALVAGE BY THE OWNER. ALL ITEMS NOT SELECTED FOR SALVAGE SHALL BECOME THE PROPERTY OF THE ELECTRICAL CONTRACTOR AND SHALL BE REMOVED BY HIM FROM THE SITE.

## 10. SUBMITTALS

- A. THIS CONTRACTOR SHALL PREPARE OR OBTAIN FROM THE MANUFACTURERS SHOP DRAWINGS OF THE ITEMS LISTED BELOW AND AFTER REVIEW AND STAMPING SHALL SUBMIT ELECTRONICALLY FOR REVIEW.
- B. ELECTRONIC SUBMITTALS SHALL BE IN PDF FORMAT. SUBMITTALS SHALL INCLUDE A TRANSMITTAL, INCLUDE A CONTRACTOR REVIEW STAMP THAT INDICATES APPROVAL BY THE CONTRACTOR, SHALL CLEARLY INDICATE EACH ITEM TO BE REVIEWED WITH SPECIFIC NOTES IDENTIFYING ANY DEVIATION FROM THE CONTRACT DOCUMENTS, AND BE BOUND INTO A SINGLE DOCUMENT NAMED TO MATCH CONTENTS.
- C. THESE DRAWINGS SHALL BE COMPLETE IN EVERY RESPECT, SHOWING PERTINENT DETAILS OF SIZE, CAPACITIES, ACCESSORIES, TYPE AND THICKNESS OF MATERIALS, WEIGHT, MAINTENANCE, FEATURES, ETC. ALL LIGHTING FIXTURES SHALL BE SUBMITTED AT ONE TIME.
  - (1) LIGHTING FIXTURES
  - (2) WIRING DEVICES
  - (3) METER PEDESTAL

## 11. OPERATION AND MAINTENANCE MANUALS

- A. ELECTRICAL CONTRACTOR SHALL FURNISH TO THE OWNER OPERATION/MAINTENANCE MANUALS AS DESCRIBED IN THE DIVISION 1 SPECIFICATIONS.
  - B. MANUALS SHALL MEET OR EXCEED ALL DIVISION 1 SPECIFICATION REQUIREMENTS AND SHALL MINIMALLY INCLUDE THREE (3) INDIVIDUALLY BOUND AND INDEXED (THUMB TABBED) MANUALS. EACH MANUAL SHALL PROVIDE OPERATING INSTRUCTIONS, MAINTENANCE MANUALS, SPARE PARTS LISTING, COPIES OF WARRANTIES, WIRING DIAGRAMS, INSPECTION PROCEDURES AND SHOP DRAWINGS ON ALL EQUIPMENT AND SYSTEMS.
  - C. UNLESS OTHERWISE DIRECTED BY THE DIVISION 1 SPECIFICATION EACH MANUAL SHALL BE BOUND IN A HEAVY-DUTY, 3 INCH, THREE-RING VINYL COVERED BINDER WITH POCKET FOLDERS FOR DRAWINGS AND FOLDED SHEET INFORMATION. EACH BINDER SHALL BE IDENTIFIED ON BOTH THE FRONT AND THE SPINE.
- ## 12. AS-BUILT DRAWINGS
- A. AS WORK PROGRESSES, RECORD ON A SET OF RED-LINED "AS-BUILT" PRINTS ANY DEVIATIONS FROM DESIGN DRAWINGS. DELIVER TO THE OWNER AND ENGINEER IN ELECTRONIC FORMAT AUTOCAD (DWG) OR ADOBE ACROBAT (PDF) BEFORE SUBMITTING THE REQUEST FOR FINAL PAYMENT.

## 13. BRANCH CIRCUIT PANELBOARDS

- A. BRANCH CIRCUIT PANELBOARDS SHALL BE DEAD FRONT TYPE AS SPECIFIED ON THE DRAWINGS. THE FRAMEWORK IS TO BE OF CODE GAUGE STEEL, RIGIDLY WELDED AND BOLTED TOGETHER TO SUPPORT ALL COVER PLATES, BUSSING, AND COMPONENT DEVICES DURING SHIPMENT AND INSTALLATION.
- B. BRANCH CIRCUIT PANELBOARDS SHALL BE ARRANGED FOR 240/120 VOLT, SINGLE-PHASE, THREE-WIRE AS SHOWN ON THE DRAWINGS.
- C. PANELBOARDS SHALL BE SEQUENCED BUSSED, I.E., CIRCUITS 1 AND 2 TO PHASE "A", 3 AND 4 TO PHASE "B", ETC., TO CONFORM TO THE BRANCH CIRCUIT NUMBERING SYSTEM SHOWN ON THE PLANS.
- D. PHASE AND NEUTRAL BUSSES SHALL BE TIN OR SILVER PLATED ALUMINUM, OF THE CURRENT RATINGS INDICATED ON THE DRAWINGS, AND SIZED FOR A MAXIMUM BUS DENSITY RATING OF 750 AMPERES/SQUARE INCH OF BUS. WHERE DRAWINGS IDENTIFY COPPER BUSSES, THE MAXIMUM BUS DENSITY SHALL BE 1000 AMPERES/SQUARE INCH OF BUS.
- E. EACH PANELBOARD SHALL CONTAIN A COPPER EQUIPMENT GROUND BUS, BOLTED TO THE INSIDE OF THE ENCLOSURE, TO ACCEPT ALL OUTGOING EQUIPMENT GROUND CONDUCTORS.
- F. MAIN BUSSES, GROUND BUS, AND THRU FEED BUS SHALL HAVE LUGS TO ACCOMMODATE INCOMING FEEDERS AND GROUNDS AS SHOWN ON THE DRAWINGS.
- G. CIRCUIT BREAKERS SHALL BE OF THE SWITCH RATED BOLT-ON TYPE WITH QUANTITY, SIZE, AND MINIMUM INTERRUPTING CAPACITY AS NOTED ON DRAWINGS.
  - (1) ARRANGE CIRCUIT BREAKERS PER THE PANELBOARD SCHEDULES ON THE DRAWINGS.
  - (2) MAIN BREAKERS, WHERE SPECIFIED, SHALL BE LOCATED AT THE TOP OR BOTTOM OF THE PANEL. BACK-FED BRANCH MOUNTED BREAKERS SHALL NOT BE USED AS MAIN BREAKERS.
  - (3) SINGLE-POLE BREAKERS SHALL BE FACTORY MOUNTED AT THE TOP OF THE PANELBOARD ASSEMBLY, UNLESS NOTED OTHERWISE.
  - (4) TWO-POLE AND THREE-POLE BREAKERS SHALL BE FACTORY MOUNTED AT THE BOTTOM OF THE PANELBOARD ASSEMBLY, BELOW ALL SINGLE-POLE BREAKERS, PROVISIONS, AND SPACES, UNLESS NOTED OTHERWISE.
- H. PANELBOARDS SHALL BE IDENTIFIED WITH AN ENGRAVED NAMEPLATE INSTALLED ON THE FRONT TRIM. REFER TO EQUIPMENT AND EQUIPMENT IDENTIFICATION SPECIFICATION SECTION FOR REQUIREMENTS.
- I. PANELBOARD CIRCUITS SHALL BE NUMBERED SEQUENTIALLY WITH ADHESIVE FACTORY LABELS. WHERE PANELBOARDS ARE TWO OR MORE SECTIONS, THE NUMBERING SEQUENCE SHALL BE CONTINUOUS, I.E. SECTION 1 NUMBERED 1 THRU 42, SECTION 2 NUMBERED 43 THRU 84, ETC.
- J. FURNISH AND INSTALL AN ARC FLASH WARNING LABEL IN A CLEARLY VISIBLE LOCATION INSIDE THE HINGED PANEL COVER OF EACH BRANCH CIRCUIT PANELBOARD TO COMPLY WITH NEC 110.16. LABELS SHALL BE BRADY IDENTIFICATION SOLUTIONS (1-800-537-8791), CAT. NO. 94913, 3.5" X 5", OR EQUIVALENT.
- K. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL.

## 14. RACEWAYS

- A. FURNISH AND INSTALL CONDUIT, SUPPORTS, BOXES, WIRE, AND NECESSARY FITTINGS AND ACCESSORIES AS REQUIRED TO MAKE A COMPLETE INSTALLATION OF THE WIRING SYSTEM INDICATED ON THE DRAWINGS.
- B. ALL WIRING SHALL BE INSTALLED IN CONDUIT, FLEXIBLE METALLIC CONDUIT, OR LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT AS INDICATED ON PLANS.
  - (1) CONDUITS INSTALLED EXPOSED OUTDOORS SHALL BE GALVANIZED RIGID TYPE UNLESS NOTED OTHERWISE. EXPANSION JOINTS SHALL BE INCORPORATED AS NEEDED FOR LONG RUNS.
  - (2) CONDUITS INSTALLED BELOW GRADE SHALL BE PVC-40 WITH PVC-80 STUB-UPS. REFER TO EXCAVATION, TRENCHING AND BACKFILL SECTION FOR ADDITIONAL INFORMATION.
  - (3) CONDUITS SHALL BE OF THE SIZE INDICATED OR REQUIRED BY THE NATIONAL ELECTRIC CODE FOR THE NUMBER AND SIZE CONDUCTORS INVOLVED. JOINTS SHALL BE CUT SQUARE, REAMED SMOOTH AND PULLED UP TIGHT. CONDUITS SHALL NOT BE SMALLER THAN 3/4", UNLESS NOTED OTHERWISE.
- C. RACEWAYS THAT ARE INSTALLED EXPOSED TO DIRECT SUNLIGHT ON ROOFTOPS SHALL HAVE 60°F ADDED TO THE OUTDOOR AMBIENT TEMPERATURE USED TO CALCULATE THE CONDUCTOR DERATING FACTOR IN COMPLIANCE WITH NEC ARTICLE 310.15(B).

## 15. CONDUCTORS

- A. FEEDER AND BRANCH CIRCUIT CONDUCTORS SHALL BE STRANDED COPPER WITH NOT LESS THAN 98% CONDUCTIVITY AND 600 VOLT TYPE THWN OR XHHW INSULATION. CONDUCTORS SHALL BE #12 AWG UNLESS INDICATED OTHERWISE ON PLANS.
- B. TYPE THHN OR XHHW (90°C) INSULATED STRANDED COPPER CONDUCTORS SHALL BE USED WHERE BRANCH CIRCUIT CONDUCTORS ARE ROUTED THRU FLUORESCENT FIXTURE CHANNELS.
- C. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE ELECTRICAL BID DOCUMENTS, THE ELECTRICAL CONTRACTOR SHALL NOT INSTALL TYPE AC ARMORED CABLE, TYPE FC FLAT CABLE, TYPE FCC FLAT CONDUCTOR CABLE, TYPE MC METAL-CLAD CABLE, TYPES NM / NMC / NMS NONMETALLIC SHEATHED CABLE, TYPES SE / USE SERVICE CABLE OR TYPE UF UNDERGROUND FEED CABLE.
- D. FEEDER CONDUCTORS SHALL BE ROUTED CONTINUOUS FROM ORIGIN TO DESTINATION, WITHOUT SPLICING, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS. FEEDER CONDUCTORS SHALL BE PULLED WITH THE USE OF AN APPROVED PULLING COMPOUND OR POWDER.
- E. FURNISH AND INSTALL CODE GAUGE SCREW COVER PULL BOXES AND TYPE LB CONDUIT FITTINGS WHERE SHOWN ON PLANS AND AS REQUIRED FOR THE SATISFACTORY INSTALLATION OF ALL FEEDER CONDUCTORS.

## F. SPLICES IN BRANCH CIRCUIT WIRES SHALL BE MADE ONLY IN READILY ACCESSIBLE JUNCTION BOXES.

- (1) IN-LINE SPLICES AND TAPS FOR CONDUCTORS #8 AWG OR SMALLER SHALL BE 600V RATED WITH "LIVE SPRINGS" AND INSULATED RIGID NYLON WING TYPE BODY, 3M "RANGER", BUCHANAN "B-CAP", OR EQUAL.
  - (2) IN-LINE CONNECTORS FOR 600V COPPER CONDUCTORS #6 AWG THRU #3 AWG SHALL BE ILSICO TYPE "CT" CIRCUMFERENTIAL COMPRESSION SLEEVES OR EQUAL BY T & B OR BUCHANAN.
  - (3) IN-LINE CONNECTORS FOR 600V COPPER CONDUCTORS #2 AWG OR LARGER SHALL BE EXTRA LONG BARREL ILSICO TYPE "CTL" COMPRESSION SLEEVES (OR EQUAL BY T & B OR BUCHANAN) WITH 3M BRAND "PST" SILICONE COLD SHRINK INSULATORS.
- ## G. ALL MULTI-WIRE BRANCH CIRCUITS THAT FEED MORE THAN ONE DEVICE OR EQUIPMENT MOUNTED ON, OR WIRED FROM, A COMMON YOKE, SHALL BE POWERED FROM A BRANCH CIRCUIT OVERCURRENT DEVICE THAT SIMULTANEOUSLY DISCONNECTS ALL UNGROUNDED SUPPLY CONDUCTORS IN FULL COMPLIANCE WITH NEC ARTICLE 210.4.
- ## H. BRANCH CIRCUIT CONDUCTORS SHALL BE COLOR CODED. CONDUCTOR INSULATION SHALL BE FACTORY COLORED IN SIZES UP THROUGH #8 AWG. COLORS SHALL BE ASSIGNED TO EACH CONDUCTOR AS DESCRIBED BELOW AND CARRIED THROUGHOUT ALL MAIN AND BRANCH CIRCUIT DISTRIBUTION.

## 208/120 VOLT

- (1) PHASE "A" CONDUCTOR BLACK
- (2) PHASE "B" CONDUCTOR RED
- (3) NEUTRAL CONDUCTOR WHITE
- (4) GROUNDING CONDUCTOR GREEN

- I. IN GENERAL, 120V AND 277V SINGLE PHASE CIRCUITS SHALL BE PROVIDED WITH DEDICATED NEUTRALS AND CONNECTED TO SINGLE POLE BREAKERS.
- J. CONTROL WIRING SHALL BE COLOR CODED SUCH THAT RED IS USED EXCLUSIVELY FOR ALL 120 VOLT CONDUCTORS AND WHITE FOR ALL NEUTRAL CONDUCTORS. ALL CONTROL WIRING TO BE IDENTIFIED AT BOTH ENDS WITH PERMANENT WIRE MARKERS.

## 16. WIRING DEVICES AND COVERPLATES

- A. WIRING DEVICES SHALL BE FURNISHED AS DESCRIBED IN THE SYMBOL SCHEDULE AND INSTALLED AT LOCATIONS SHOWN ON THE DRAWINGS. WIRING DEVICES TO BE COOPER "INDUSTRIAL SPEC GRADE", HUBBELL "HBL" SERIES, LEVITON "LEV-SPC", OR PASS & SEYMOUR "INDUSTRIAL SPEC GRADE".
- (1) DEVICES SHALL HAVE ONE-PIECE BRASS MOUNTING STRAP.
- B. COVERPLATES FOR FLUSH MOUNTED AND SURFACE MOUNTED DEVICES IN WIREMOLD BOXES SHALL BE 0.04" THICK BRUSHED FINISH, STAINLESS STEEL. WHERE TWO OR MORE DEVICES ARE SET AT ONE POINT, THEY SHALL BE COVERED WITH A COMMON PLATE.
- C. WHERE DECORATIVE SCREW-LESS COVERPLATE SWITCHES OR DIMMERS ARE LOCATED ADJACENT TO STANDARD TOGGLE SWITCHES THEY SHALL BE INSTALLED IN SEPARATE BOXES.
- D. COVERPLATES FOR SURFACE MOUNTED DEVICES IN CAST FS BOXES SHALL BE HEAVY-GAUGE GALVANIZED STAMPED SHEET STEEL, CROUSE HINDS TYPE "DS" OR APPLETON TYPE "FSK".

## 17. LIGHTING FIXTURES AND LAMPS

- A. FURNISH AND INSTALL LIGHTING FIXTURES AS INDICATED IN THE FIXTURE SCHEDULE ON THE DRAWINGS.
- B. FURNISH AND INSTALL ALL REQUIRED MOUNTING ACCESSORIES AND FITTINGS TO ENSURE PROPER INSTALLATION AND CONFORMANCE WITH THE CODE. FIXTURES SHALL BE SUPPORTED IN ACCORDANCE WITH ARTICLE 410 OF THE NEC.
- C. FIXTURES SHALL BE GROUND TO THE CONDUIT SYSTEM EITHER THROUGH THE HANGING DEVICE OR BY MEANS OF A #14 GREEN JUMPER.
- D. GENERAL:
  - (1) LUMINAIRE MANUFACTURER SHALL HAVE A MINIMUM OF FIVE (5) YEARS EXPERIENCE IN THE MANUFACTURE AND DESIGN OF LED PRODUCTS AND SYSTEMS AND NO LESS THAN ONE HUNDRED (100) NORTH AMERICAN INSTALLATIONS.
  - (2) UNLESS OTHERWISE SPECIFIED, ALL LED LUMINAIRES AND POWER/DATA SUPPLIES SHALL BE PROVIDED BY A SINGLE MANUFACTURER TO ENSURE COMPATIBILITY.
  - (3) INCLUDE ALL COMPONENTS NECESSARY FOR A COMPLETE INSTALLATION. PROVIDE ALL POWER SUPPLIES, SYNCHRONIZERS, DATA CABLES, AND DATA TERMINATORS FOR A COMPLETE WORKING SYSTEM.
  - (4) ALL LED SOURCES USED IN THE LED LUMINAIRE SHALL BE OF PROVEN QUALITY FROM ESTABLISHED AND REPUTABLE LED MANUFACTURERS AND SHALL HAVE BEEN FABRICATED AFTER 2007.

## E. WARRANTY:

- (1) SYSTEM SHALL CARRY A FULL WARRANTY FOR FIVE (5) YEARS. MANUFACTURER SHALL BE RESPONSIBLE FOR COST OF SHIPPING AND LABOR TO REPLACE ANY COMPONENT OF THE SYSTEM THAT FAILS WITHIN 2 YEARS OF INSTALLATION.

## F. PRODUCTS AND COMPONENTS - PERFORMANCE

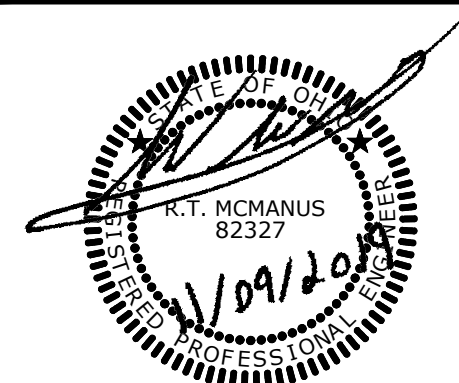
- (1) LED LUMINAIRES AND COMPONENTS SHALL BE UL LISTED OR UL CLASSIFIED.
  - (2) ALL LED COMPONENTS SHALL BE RESTRICTION OF HAZARDOUS SUBSTANCE DIRECTIVE (ROHS) COMPLIANT.
  - (3) LED LUMINAIRES SHALL BE TESTED BY A CERTIFIED TESTING AGENCY AND SHALL COMPLY WITH IESNA LM-79 APPROVED METHOD FOR ELECTRICAL AND PHOTOMETRIC MEASUREMENT OF SOLID-STATE LIGHTING PRODUCTS.
  - (4) LEDS SHALL COMPLY WITH ANSI/NEMA/ANSI 78.377-2008 - SPECIFICATIONS FOR THE CHROMATICITY OF SOLID-STATE LIGHTING PRODUCTS. COLOR SHALL REMAIN STABLE THROUGHOUT THE LIFE OF THE LAMP.
  - (5) LEDS SHALL COMPLY WITH IESNA LM-80 AND TM-21 - STANDARDS FOR LUMEN MAINTENANCE OF LED LIGHTING PRODUCTS
  - (6) WHITE LEDS SHALL HAVE A RATED SOURCE LIFE OF 50,000 HOURS UNDER NORMAL OPERATING CONDITIONS. LED "RATED SOURCE LIFE" IS DEFINED AS THE TIME WHEN A MINIMUM OF 70% OF INITIAL LUMEN OUTPUT REMAINS.
  - (7) LUMINAIRE ASSEMBLY SHALL INCLUDE A METHOD OF DISSIPATING HEAT SO AS TO NOT DEGRADE LIFE OF SOURCE, ELECTRONIC EQUIPMENT, OR LENSES. LED LUMINAIRE HOUSING SHALL BE DESIGNED TO TRANSFER HEAT FROM THE LED BOARD TO THE OUTSIDE ENVIRONMENT. LUMINAIRE HOUSING SHALL HAVE NO NEGATIVE IMPACT ON LIFE OF COMPONENTS.
  - (8) FOR WET AND DAMP USE, LED-BASED LUMINAIRES ITSELF SHALL BE SEALED, RATED, AND TESTED FOR APPROPRIATE ENVIRONMENTAL CONDITIONS, NOT ACCOMPLISHED BY USING AN ADDITIONAL HOUSING OR ENCLOSURE. SUCH LUMINAIRES SHALL BE MARKED "SUITABLE FOR WET LOCATIONS" AND "SUITABLE FOR DAMP LOCATIONS", RESPECTIVELY, IN ACCORDANCE WITH ARTICLE 410 OF THE NEC.
  - (9) ALL HARDWIRED CONNECTIONS TO LED LUMINAIRES SHALL BE REVERSE POLARITY PROTECTED AND PROVIDE HIGH VOLTAGE PROTECTION IN THE EVENT CONNECTIONS ARE REVERSED OR SHORTED DURING THE INSTALLATION PROCESS.
  - (10) THE LED LUMINAIRE SHALL BE OPERATED AT CONSTANT AND CAREFULLY REGULATED CURRENT LEVELS. LEDS SHALL NOT BE OVERDRIVEN BEYOND THEIR SPECIFIED NOMINAL VOLTAGE AND CURRENT.
- ## 18. GROUNDING
- A. FURNISH AND INSTALL GROUND CONDUCTORS AS INDICATED ON THE DRAWINGS. CONDUCTORS SHALL BE INSULATED COPPER, TYPE THWN, IDENTIFIED GREEN, AND SIZED AS SHOWN ON THE DRAWINGS.



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FRONT STREET CORNER  
PLAZA  
CITY OF CUYAHOGA FALLS



DATE:

## REVISIONS

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## ELECTRICAL SPECIFICATIONS

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