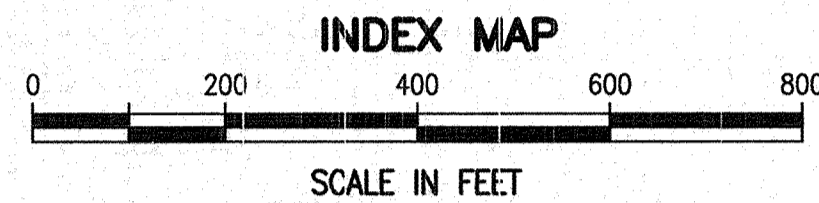
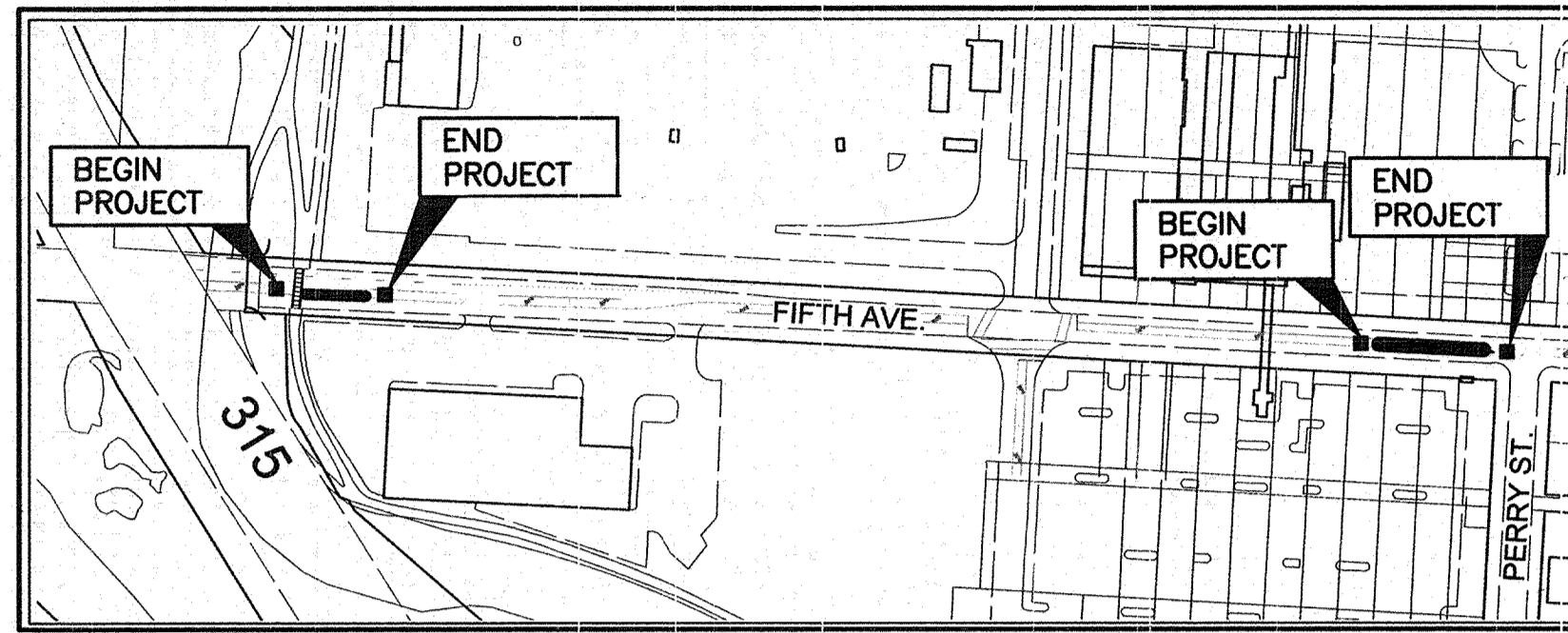


CITY OF COLUMBUS  
TRANSPORTATION DIVISION

SSI OVERALL TRAFFIC  
MANAGEMENT PLAN  
PHASE I

FIFTH AVENUE  
BETWEEN OLENTANGY RIVER ROAD  
AND PERRY ST  
TRAFFIC ISLANDS



**DESCRIPTION**

PROJECT CONSISTS OF INSTALLATION OF TWO MID-BLOCK MEDIANS ON FIFTH AVE.—INCLUDING LANDSCAPING, RAISED PLANTERS, AND DECORATIVE LIGHTS.

**2002 SPECIFICATIONS**

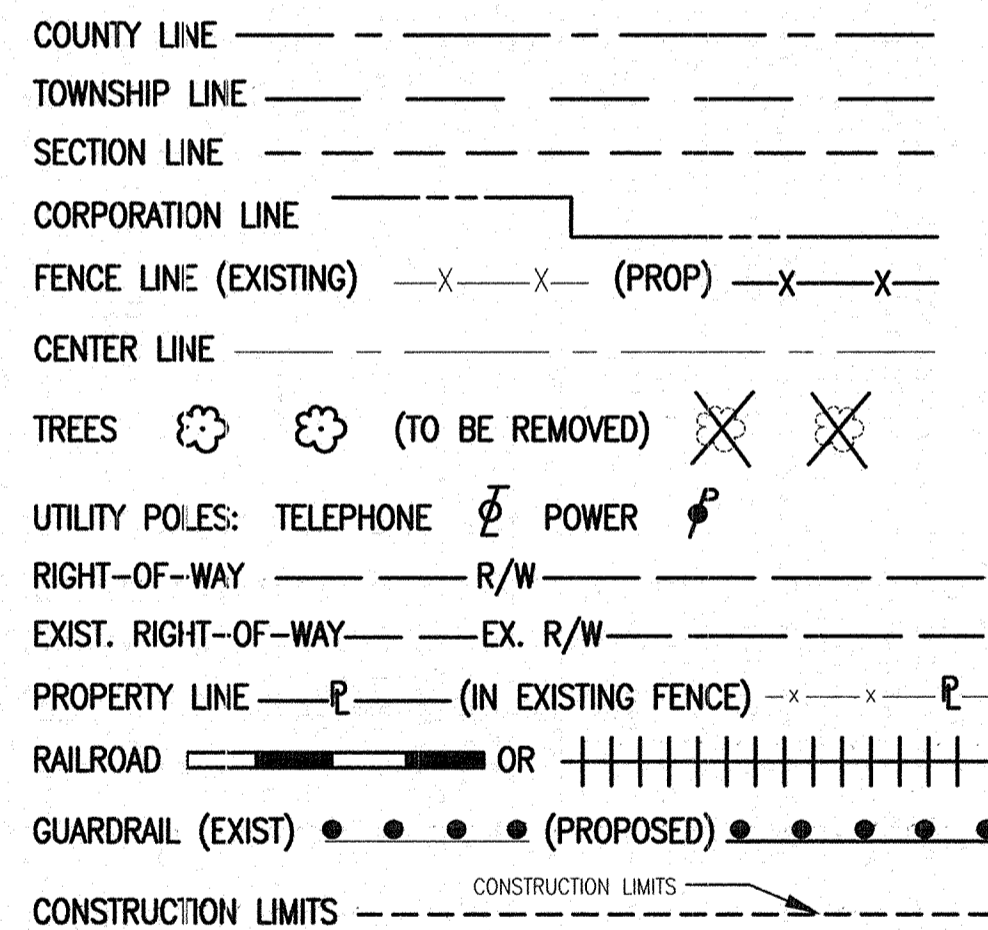
THE CONSTRUCTION AND MATERIAL SPECIFICATIONS BY THE CITY OF COLUMBUS, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

**BENCHMARKS**

BM#1: MAG NAIL SET 38.05' W. AND 12.45' N. OF M.H. FOUND ON N. EDGE OF FIFTH AVE. 54'± E. OF OLENTANGY BIKEWAY C.L. STA. 15+75.93, 29.14' LT., ELEV. 732.07

BM#2: MAG NAIL SET 18.36' E. AND 8.27' S. OF M.H. FOUND AT S.E. CORNER OF FIFTH AVE. AND PERRY ST. STA. 29+38.31, 27.58 RT., ELEV. 739.96

**CONVENTIONAL SYMBOLS**



**INDEX OF SHEETS**

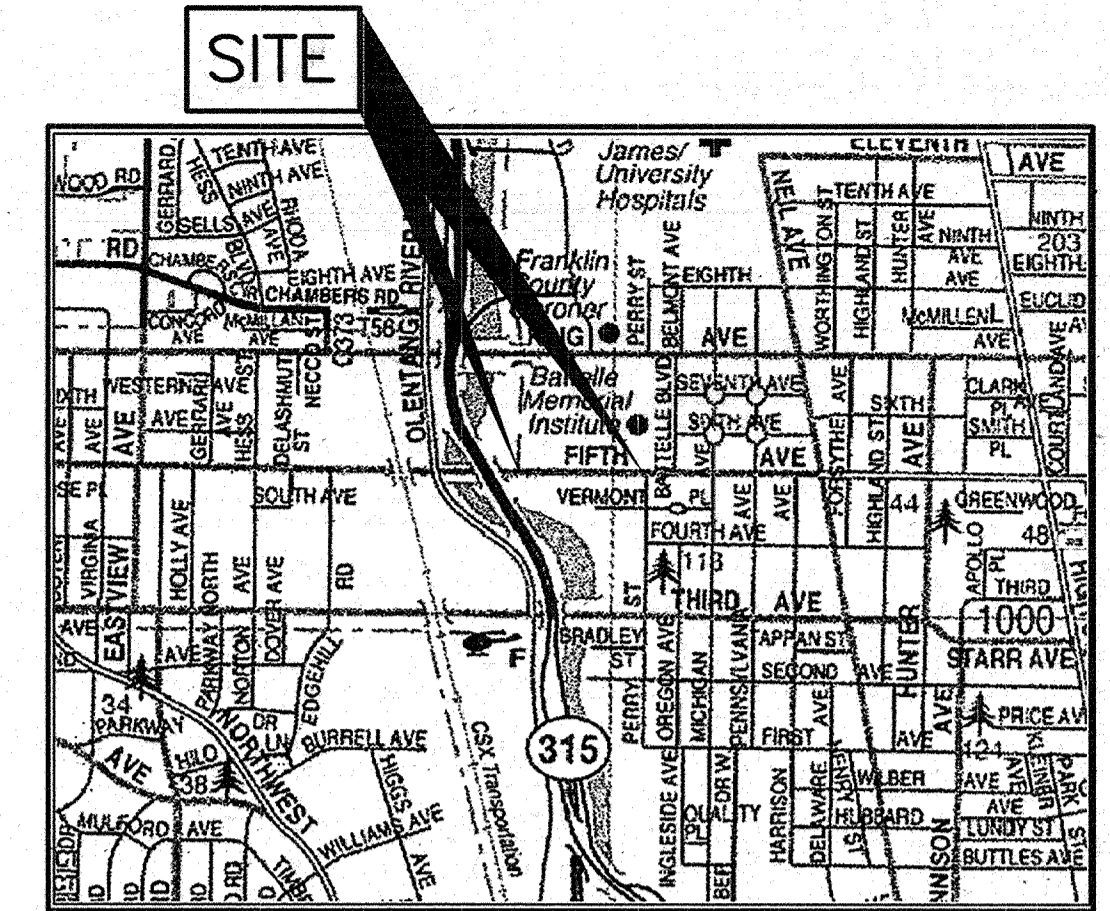
TITLE SHEET	1
GENERAL NOTES	2-5
MAINTENANCE OF TRAFFIC NOTES	6
MAINTENANCE OF TRAFFIC	7-8
GENERAL SUMMARY	9
PLAN	10-11
PLAN DETAILS/TYPICAL SECTIONS	12-13
WEST MEDIAN PLANTER & PAVER LAYOUT	14
WEST ALTERNATE 3 CAST STONE VENEER	15
EAST MEDIAN PLANTER & PAVER LAYOUT	16
TRAFFIC CONTROL NOTES	17
TRAFFIC CONTROL	18-19
LIGHTING NOTES	20
LIGHTING	21
PLANTING & PLANTING SPECIFICATIONS	22

**STANDARD CONSTRUCTION DRAWINGS**

CITY OF COLUMBUS	CITY OF COLUMBUS SUPPLEMENTAL SPECIFICATIONS
1441 DR. A	07-15-02
2000 DR. A	
2010 DR. A	
2300 DR. A	
2301 DR. A (ARTERIAL)	
2442 DR. A	
2319 DR. A	
2320 DR. A	
MIS-4	06-02
MIS-14	08-99
MIS-15	08-01
MIS-16	08-99
MIS-17	08-99
MIS-25	12-03
MIS-41	12-03
MIS-51	06-03
MIS-91	05-96

REVISION	DESCRIPTION	SHEET/SHEETS	INITIAL	DATE

**UNDERGROUND UTILITIES**  
TWO WORKING DAYS  
**BEFORE YOU DIG**  
CALL 1-800-362-2764 (TOLL FREE)  
OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY



LOCATION MAP

CITY OF COLUMBUS SIGNATURES ON THIS PLAN SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLAN.

*Terry Dull* 6-12-08  
DESIGN AND PLAN SERVICES ENGINEER, TRANSPORTATION DIVISION DATE

*R.C. Mitchell* 12-1-08  
ADMINISTRATOR, DIVISION OF POWER AND WATER DATE

*Paul J. Blakeslee* 12-16-08  
ADMINISTRATOR, DIVISION OF SEWERAGE AND DRAINAGE DATE

*[Signature]* 12/16/08  
DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES DATE

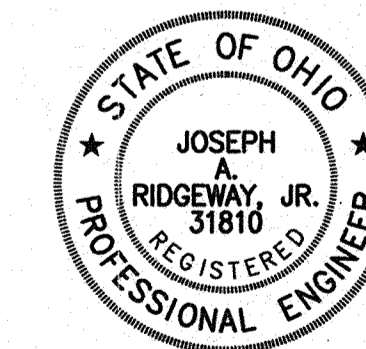
*L. Littoral* 6-17-08  
HYDRANT SUPERVISOR, DIVISION OF FIRE DATE

*John P. Reppe - Netrol Manon* 6-18-08  
ADMINISTRATOR, DIVISION OF TELECOMMUNICATION DATE

*Alan D. McKnight / ml* 6-18-08  
DIRECTOR, DEPARTMENT OF RECREATION AND PARKS DATE

*RJ Bo* 12/18/08  
CITY ENGINEER, TRANSPORTATION DIVISION DATE

*Mark Colsey / MB* 12/22/08  
DIRECTOR, DEPARTMENT OF PUBLIC SERVICE DATE



By *Joseph A. Ridgway, Jr.* 5-19-08  
Registered Engineer Date

**POD design**  
330 W. Spring St., Suite 300  
Columbus, OH 43215  
p. 614.255.5390 f. 614.255.3999  
www.poddesign.net  
planning landscape architecture  
graphic communication

**E.P. FERRIS AND ASSOCIATES INC.**  
CONSULTING CIVIL ENGINEERS AND SURVEYORS  
880 KING AVENUE  
COLUMBUS, OHIO 43212  
(614) 299-2999 Fax (614) 299-9929

CONSTRUCTION PROJECT NO. 21601  
TRAFFIC ISLANDS / PLANTERS  
FIFTH AVE. BETWEEN OLENTANGY RIVER RD. AND PERRY ST.  
SSI OVERALL TRAFFIC MANAGEMENT PLAN  
CITY OF COLUMBUS  
1/22

2321 E

plan #05-257p







**TREE PLANTING APPROVAL REQUIRED**

WHEN A TREE IS TO BE PLANTED WITHIN THE CITY RIGHT-OF-WAY, PRIOR TO PLANTING THE CONTRACTOR WILL CONTACT AND RECEIVE APPROVAL FROM THE FORESTRY OFFICE (614) 645-6640 FOR THE CITY OF COLUMBUS.

**EXISTING TREES**

ALL TREES AND BUSHES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL NOT BE DESTROYED UNLESS CLEARLY DESIGNATED FOR REMOVAL ON THE PLANS OR IF PRIOR WRITTEN APPROVAL BY THE CITY OF COLUMBUS HAS BEEN GIVEN. THE CONTRACTOR SHALL USE SPECIAL PRECAUTIONS DURING THE CLEARING PROCESS TO AVOID DAMAGE TO ALL OTHER TREES AND BUSHES.

**TREE TRIMMING/CUTTING/PROTECTION**

THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL TREES. IF TREE TRIMMING IS REQUIRED, A PERMIT MUST BE ACQUIRED FROM THE CITY FORESTER AT THE DEPARTMENT OF RECREATION AND PARKS. NO CONSTRUCTION SHALL TAKE PLACE WITHIN TEN (10) FEET OF ANY TREE WITHOUT PRIOR APPROVAL OF THE CITY FORESTER AT (614) 645-6640.

**SEEDING & MULCHING, AS PER PLAN**

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND PLACE SEEDING AND MULCHING AS DETERMINED BY THE ENGINEER. THE FOLLOWING QUANTITY IS CARRIED TO THE GENERAL SUMMARY.

ITEM 659 - SEEDING AND MULCHING 152 S.Y.

SEED MIXTURE: "TEAM MATES PLUS" BY LESCO INC. COMPARABLE MIXTURES MAY BE SUBMITTED FOR REVIEW.

1. COMPOSITION:
  - A. 70% TURF-TYPE FESCUES (TITAN II, STETSON, LANCER).
  - B. 20% PERENNIAL RYEGRASS (WIZARD).
  - C. 10% KENTUCKY BLUEGRASS (MERIT, BARON, SHAMROCK, WILDWOOD).
2. RATE: 8-10 LBS. PER 1000 SQ. FT.

**DIVISION OF SEWERS AND DRAINS**

MAINTAIN A MINIMUM OF 3' HORIZONTAL AND 1' VERTICAL CLEARANCE FROM ALL SEWER LINES AND 10' HORIZONTAL AND 5' VERTICAL FROM ALL BRICK SEWERS, UNLESS APPROVED BY A CITY ENGINEER. CLEARANCE IS MEASURED FROM EDGE TO NEAREST EDGE; NOT CENTER TO CENTER.

SEWER MAINTENANCE WILL ONLY LOCATE AND MARK MAIN WATER LINE SEWERS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICE LATERALS. ANY DAMAGE TO MAIN SEWER LINES OR SERVICE LATERALS IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL REPAIRS MUST BE PERFORMED BY A LICENSED SEWER CONTRACTOR, UNDER A SEPARATE SEWER PERMIT.

**TEMPORARY SOIL EROSION AND SEDIMENT CONTROL**

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

ITEM 207, INLET PROTECTION-BEAVER DAMS 5 EA.

**EROSION AND SEDIMENT CONTROL**

LAND DISTURBANCE AREAS LESS THAN ONE ACRE AND NOT PART OF A LARGER COMMON PLAN OF DEVELOPMENT ARE NOT REQUIRED TO SUBMIT TO THE CITY OF COLUMBUS A FULL SCALE EROSION AND SEDIMENT CONTROL PLAN FOR APPROVAL. HOWEVER, THE PROPOSED LAND DISTURBING ACTIVITIES MUST COMPLY WITH ALL OF THE PROVISIONS OF THE DIVISION OF SEWERAGE AND DRAINAGE EROSION AND SEDIMENT CONTROL REGULATION. ALL LAND DISTURBING ACTIVITIES SHALL BE SUBJECT TO INSPECTION AND SITE INVESTIGATION BY THE CITY OF COLUMBUS TO DETERMINE COMPLIANCE WITH CITY STANDARDS AND REGULATIONS. FAILURE TO COMPLY WITH THESE REGULATIONS MAY SUBJECT THE SITE TO ENFORCEMENT ACTION BY THE CITY. QUESTIONS REGARDING EROSION AND SEDIMENT CONTROL MAY BE REFERRED TO THE STORMWATER MANAGEMENT OFFICE AT 645-6311.

ON-SITE CONTACT: KIM SHEPHERD P.E.  
PHONE: 645-3972  
FAX: 645-6938  
E-MAIL: cpshepherd@columbus.gov  
SITE IS TRIBUTARY TO: THE OLENTANGY RIVER

**BRICK PAVERS**

ALL BRICK PAVERS SHALL BE SOLID CONCRETE PAVING UNITS CONFORMING TO ASTM C936.

**CONCRETE BASE BRICK PAVERS**

ALL WORK FOR THE CONCRETE BASE SHALL CONFORM TO ITEM 608, EXCEPT THAT THE 608 REQUIREMENTS FOR EDGING OUTSIDE EDGES AND CONTROL JOINTS AT 5-FOOT INTERVALS SHALL BE WAIVED.

**NEOPRENE MODIFIED ASPHALT ADHESIVE BRICK PAVERS**

FURNISH NEOPRENE-MODIFIED ASPHALT ADHESIVE THAT CONTAINS 2 PERCENT NEOPRENE, GRADE WMI, OXIDIZED ASPHALT WITH A 150 DEGREE SOFTENING POINT (77 PENETRATION), AND 10 PERCENT LONG FIBERIZED INERT MATERIAL AS SUPPLIED BY (OR APPROVED EQUAL):

SEIDEL COMPANY, INC.  
11 MARKET SQUARE  
NEWBURYPORT, MASSACHUSETTS 01950  
(617) 649-6740

HASTINGS PAVEMENT CO., INC.  
410 LAKEVILLE ROAD  
LAKE SUCCESS, NEW YORK 11042  
(516) 379-3500

**BITUMINOUS SETTING BED BRICK PAVERS**

FURNISH ASPHALT CEMENT CONFORMING TO ASTM D3381, VISCOSITY GRADE AC-10 OR AC-20. FURNISH FINE AGGREGATE OF NATURAL SAND AND/OR STONE SAND, COMPOSED OF HARD, TOUGH, DURABLE, UNCOATED PARTICLES, FREE FROM CLAY, SILT, ORGANIC MATERIAL OR OTHER DELETERIOUS SUBSTANCES. INSURE THE SAND IS UNIFORMLY GRADED WITH ALL MATERIAL PASSING THE NO. 4 SIEVE AND MEETING THE REQUIREMENTS OF ASTM C136.

COMBINE THE DRIED FINE AGGREGATE WITH HOT ASPHALT CEMENT AND MIX HEAT TO APPROXIMATELY 300 DEGREES FAHRENHEIT AT AN ASPHALT PLANT.

PROVIDE AN APPROXIMATE PROPORTION OF MATERIALS OF 7 PERCENT ASPHALT CEMENT AND 93 PERCENT FINE AGGREGATE. PROVIDE EACH TO APPORTION BY WEIGHT TO 140 POUNDS OF ASPHALT CEMENT AND 1,860 POUNDS OF FINE AGGREGATE.

**METHOD OF MEASUREMENT - BRICK PAVERS**

BRICK PAVERS SHALL BE MEASURED BY THE SQUARE FOOTAGE OF THE FINISHED PAVERS THAT ARE CONSIDERED COMPLETED AND IN PLACE.

**BASIS OF PAYMENT - BRICK PAVERS**

THE ACCEPTED QUANTITIES OF BRICK PAVERS WILL BE PAID FOR AT THE CONTRACT PRICES DESIGNATED FOR EACH OF THE PAVEMENT TYPES SHOWN ON THE PLANS. EXCAVATIONS, BACKFILL, EXPANSION JOINT MATERIAL, ASPHALT ADHESIVE, BITUMINOUS SETTING BED, 4-INCH CONCRETE BASE, AND OTHER RELATED MISCELLANEOUS ITEMS WILL NOT BE PAID FOR SEPARATELY. ALL COSTS SHALL BE INCLUDED IN THE SQUARE FOOT UNIT PRICE OF THE FINISHED BRICK PAVERS.

**CAST STONE CURB COMPLETE IN PLACE**

ALL CAST STONE CURB COMPONENTS SHOWN IN DETAIL, (CAST STONE CURB, COMPLETE IN PLACE), INCLUDING CAST STONE AND CONCRETE FOOTER, ARE INCLUDED IN ITEM COST, PER LF, FOR THE CURB. SEE SHEETS 13 AND 17 FOR DETAIL AND SPECIFICS.

**IRON WICKET FENCE COMPLETE IN PLACE**

ALL FENCE COMPONENTS SHOWN IN DETAIL, (WICKET FENCE, COMPLETE IN PLACE), INCLUDING CONCRETE FOOTER AND CORE DRILL WITH GROUT, ARE INCLUDED IN ITEM COST, PER LF, FOR THE FENCE. SEE SHEETS 13 AND 17 FOR DETAIL AND SPECIFICS.

**TREE PROTECTION DURING CONSTRUCTION**

PUBLIC TREES WILL BE PROTECTED AGAINST INJURY OR DAMAGE TO BRANCHES, TRUNKS OR ROOTS FROM CONSTRUCTION AND EXCAVATION.

1. HEAVY EQUIPMENT WILL NOT BE ALLOWED TO COMPACT THE SOIL OVER THE CRITICAL ROOT ZONE OF EXISTING TREES. RESTRICTED EQUIPMENT ACCESS ROUTES WILL BE ESTABLISHED BEFORE WORK IS BEGUN. TEMPORARY PAVING MATERIALS SUCH AS PLYWOOD OR RUBBER MATTING SPREAD OVER THE ROOT ZONE MAY BE REQUIRED TO PREVENT COMPACTION.

2. INSTALLATION OF UTILITIES UNDER THE DRIPLINE OF EXISTING TREES MUST BE DIRECTIONALLY BORED OR DRILLED BELOW THE ROOT ZONE. TOP OF THE BORE OR TUNNEL SHOULD BE NO HIGHER THAN 3 FEET DEEP. OPEN TRENCHES WITHIN THE ROOT ZONE MUST BE AVOIDED. WHEN ROOTS MUST BE SEVERED, CLEAN CUTS MUST BE MADE WITH PROPER PRUNING TOOLS.

3. WHERE GRADE CHANGE IS REQUIRED WITHIN THE ROOT ZONE OF PUBLIC TREES, A SUFFICIENT RESIDUAL ROOT ZONE TO PROVIDE FOR THE GOOD HEALTH OF THE TREES SHOULD REMAIN UNDISTURBED AND PROTECTED BY EITHER A DRY WELL OR RETAINING WALL IF THE GRADE IS TO BE RAISED OR LOWERED.

4. CONSTRUCTION MATERIALS, EXCAVATION DEBRIS, CHEMICALS, FUEL, EQUIPMENT OR VEHICLES ARE NOT TO BE STOCKPILED, STORED, DUMPED OR PARKED WITHIN THE DRIPLINE OF PUBLIC TREES.

5. FIRES ARE NOT PERMITTED WITHIN THE DRIPLINE OF ANY TREES.

6. ALL EXISTING TREES DESIGNATED FOR PRESERVATION WILL BE PROTECTED WITH GOOD, SUBSTANTIAL FENCE, FRAME OR BOX NOT LESS THAN FOUR FEET HIGH AND AS FAR FROM THE TREE AS POSSIBLE. DRIPLINE IS PREFERABLE, HOWEVER, ACTUAL LOCATION WILL BE DETERMINED BY SITE LIMITATIONS.

7. FENCING WILL BE INSTALLED BEFORE COMMENCING SITE PREPARATION WORK. FENCE MUST BE MAINTAINED DURING THE FULL CONSTRUCTION PERIOD.

8. INTERFERING BRANCHES OF TREES MAY BE REMOVED WHEN ACCEPTABLE TO THE CITY FORESTER AND SHALL BE PRUNED IN ACCORDANCE WITH ANSI A300 AND Z133.1 STANDARDS.

9. ANY TREES DAMAGED OR DESTROYED DUE TO CONTRACTOR NEGLIGENCE WILL BE TREATED OR REMOVED AT THE CONTRACTOR'S EXPENSE. IF DAMAGED BEYOND REPAIR, THE CITY WILL REQUIRE REIMBURSEMENT FOR THE VALUE OF THE TREE AS DETERMINED BY THE CURRENT EDITION OF THE "GUIDE FOR PLANT APPRAISAL" PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE.

**UNIT PAVERS**

1.1 RELATED DOCUMENTS

A. DRAWINGS AND GENERAL CONDITIONS OF THE CONTRACT, INCLUDING THE CMSC, DIVISION 1 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.2 SUMMARY

A. GENERAL: THE WORK IN THIS SECTION OF THE SPECIFICATIONS CONSISTS OF FURNISHING LABOR, MATERIALS, APPLIANCES, TOOLS AND EQUIPMENT TO FURNISH AND INSTALL CLAY AND CONCRETE PAVERS AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.

B. PRINCIPAL WORK IN THIS SECTION:

1. CLAY PAVERS IN MEDIANS AND CROSSWALKS.
- C. RELATED WORK FURNISHED AND INSTALLED IN OTHER SECTIONS.
  1. CMSC - CONSTRUCTION AND MATERIALS SPECIFICATION - CITY OF COLUMBUS
  2. SECTION 02764 - PAVEMENT JOINT SEALANTS/CAULKING
  3. SECTION 02751 - CEMENT CONCRETE PAVEMENT

1.3 APPLICABLE STANDARDS AND SPECIFICATIONS

- A. ASTM STANDARDS CURRENT EDITIONS :
  1. ASTM C-67 STANDARD TEST METHOD FOR SAMPLING AND TESTING BRICK AND STRUCTURAL CLAY TILE
  2. ASTM C-136 STANDARD TEST METHOD FOR SIEVE ANALYSIS FOR FINE AND COARSE AGGREGATES
  3. ASTM C-902 STANDARD SPECIFICATION FOR PEDESTRIAN AND LIGHT TRAFFIC PAVING PRICK.
  4. ASTM D-4751 STANDARD TEST METHOD FOR DETERMINING APPARENT OPENING SIZE OF A GEOTEXTILE.
  5. ASTM D-4833 STANDARD TEST METHOD FOR INDEX PUNCTURE RESISTANCE OF GEOTEXTILES, GEOMEMBRANES, AND RELATED PRODUCTS.

1.4 SUBMITTALS

A. MANUFACTURER'S DETAILS: THE CONTRACTOR SHALL SUBMIT DETAILS OF THE FOLLOWING FOR APPROVAL BY THE CITY OF COLUMBUS TRANSPORTATION DIVISION.

1. A LIST OF ALL PRODUCTS AND MANUFACTURERS OF MATERIALS AND PRODUCTS COVERED IN THIS SECTION.
2. MANUFACTURER'S DATA FOR ALL MATERIALS COVERED IN THIS SECTION IN ACCORDANCE WITH THE REQUIREMENTS OF DIVISION 1, TOGETHER WITH THE QUALITY AND TESTING PROCEDURES TO BE PROPOSED BY THE MANUFACTURERS.
- B. INSTALLER'S DETAILS: THE CONTRACTOR SHALL SUBMIT DETAILS OF THE INSTALLER'S QUALIFICATIONS INCLUDING PREVIOUSLY COMPLETED WORK, AND METHOD STATEMENT, AS DESCRIBED IN PART 3, EXECUTION 3.1.A. FOR APPROVAL BY THE CITY OF COLUMBUS TRANSPORTATION DIVISION.
- C. PAVEMENT SAMPLES: SUBMIT TWO SETS OF SAMPLES, MINIMUM OF FOUR PAVERS PER SAMPLE, TO THE CITY OF COLUMBUS TRANSPORTATION DIVISION TO DEMONSTRATE THE POTENTIAL COLOR AND TEXTURE VARIATION OF THE CLAY AND CONCRETE PAVERS TO BE USED IN THE WORKS.
- D. OTHER MATERIALS: SUBMIT TWO SAMPLES OF EACH OF THE FOLLOWING:
  1. 1 LB. BAG OF BEDDING STONE.
  2. 1 LB. BAG OF JOINTING SAND.

1.5 QUALITY ASSURANCE

- A. PAVEMENT MANUFACTURER QUALIFICATIONS:
  1. THE MANUFACTURER SHALL HAVE A MINIMUM OF 10 YEARS SUCCESSFUL EXPERIENCE IN THE MANUFACTURE OF CLAY PAVERS.
  2. THE MANUFACTURER SHALL HAVE SUFFICIENT PRODUCTION CAPACITY AND ESTABLISHED QUALITY CONTROL PROCEDURES TO PRODUCE, TRANSPORT, AND DELIVER THE REQUIRED PAVERS OF THE QUALITY SPECIFIED, WITHOUT CAUSING DELAY TO THE WORK.
  3. THE MANUFACTURER SHALL HAVE SUITABLY EXPERIENCED PERSONNEL AND A MANAGEMENT CAPABILITY SUFFICIENT TO PRODUCE PAVERS AS DEPICTED ON THE DRAWINGS AND SPECIFIED HEREIN.
- B. INSTALLER QUALIFICATIONS:
  1. THE INSTALLER SHALL HAVE A MINIMUM OF 5 YEARS CUMULATIVE EXPERIENCE IN THE INSTALLATION OF UNIT PAVERS, WITH CURRENT OR FORMER COMPANIES ABLE TO SUCCESSFULLY INSTALL BRICK OR CONCRETE PAVERS, SIMILAR TO THE PAVERS AND SETTING SYSTEMS REQUIRED FOR THIS PROJECT. THE INSTALLER SHALL SUBMIT A MINIMUM OF THREE SAMPLE PROJECTS IN WHICH THEY INSTALLED UNIT PAVERS.
  2. THE INSTALLER SHALL HAVE SUITABLY EXPERIENCED PERSONNEL AND A MANAGEMENT CAPABILITY SUFFICIENT TO EXECUTE THE WORK SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
  3. THE INSTALLER'S SUPERVISOR SHALL HAVE A MINIMUM OF 5 YEARS CUMULATIVE EXPERIENCE IN THE INSTALLATION OF UNIT PAVEMENT SYSTEMS SIMILAR IN SIZE AND NATURE TO THIS PROJECT. THE CONTRACTOR SHALL ENSURE THAT THE SUPERVISOR IS ON SITE FOR THE ENTIRE DURATION OF THE WORK.
- C. COORDINATION:
  1. COORDINATE WORK IN THIS SECTION WITH THAT AFFECTING OR AFFECTED BY OTHER TRADES TO ENSURE THE SMOOTH PROGRESSION OF THE WORKS.
  2. SCHEDULE A PRE-INSTALLATION MEETING AND OTHER PROGRESS MEETINGS AS REQUIRED, OR REQUESTED BY THE CITY OF COLUMBUS TRANSPORTATION DIVISION.
  3. NOTIFY CITY OF COLUMBUS TRANSPORTATION DIVISION WITHIN ONE DAY OF ALL INTERRUPTIONS TO THE WORKS AND PROVIDE DATE OF RECOMMENCEMENT OF INSTALLATION OPERATIONS.
  4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESPONDING TO ALL FIELD REPORT COMMENTS ISSUED BY THE CITY OF COLUMBUS TRANSPORTATION DIVISION TO THE CONSTRUCTION MANAGER WITHIN ONE WEEK.
  5. THE CONTRACTOR WILL ENSURE THAT THE INSTALLER HAS A FULL SET OF THE LATEST VERSION OF PAVEMENT DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES, AND WILL BE RESPONSIBLE FOR COMPLETING WORK ON THE MOST RECENTLY ISSUED DRAWINGS & SPECIFICATIONS.

1.6 DELIVERY, STORAGE AND HANDLING

- A. PACKAGING: CLAY PAVERS SHALL BE PACKAGED ON PALLETS IN SUCH A WAY AS TO MINIMIZE DAMAGE DURING TRANSPORTATION, DELIVERY, STORAGE AND HANDLING.
- B. RATE OF SUPPLY: DELIVER CLAY PAVERS TO THE CONSTRUCTION SITE IN SUCH QUANTITIES AND AT SUCH TIMES AS WILL ASSURE THE CONTINUITY OF THE INSTALLATION.
- C. STORAGE: PLACE PALLETS ON FIRM, LEVEL, AND SMOOTH SURFACES AND AT LEAST 4 IN. ABOVE THE GROUND. PALLETS SHALL NOT BE STACKED MORE THAN TWO HIGH. PLACE STORED PALLETS SO THAT IDENTIFICATION MARKS ARE VISIBLE. COVERS SHALL ALLOW AIR TO CIRCULATE FREELY AROUND THE PALLETS.
- D. DAMAGED PAVERS: NO PAVEMENT, OR PART THEREOF, USED IN THE WORKS SHALL EXHIBIT OBVIOUS SIGNS OF DAMAGE ON THE TOP SURFACE, INCLUDING BUT NOT LIMITED TO CHIPPING, CRACKING, STAINING, AND SPLITTING. SUCH DAMAGE TO CLAY PRODUCTS SHALL BE GROUNDS FOR REJECTION. CONTRACTOR SHALL TAKE NOTE OF OTHER ACTIVITY, CONSTRUCTION OR OTHERWISE, THAT MAY DAMAGE NEWLY INSTALLED UNDAUNTED PAVERS.
- E. BEDDING STONE: DELIVER AND STOCKPILE BEDDING STONE IN SUCH A WAY AS TO MINIMIZE CONTAMINATION AND SEGREGATION. STOCKPILES SHALL BE LOCATED ON FIRM LEVEL, AND SMOOTH SURFACES THAT DO NOT CHANNEL WATER INTO THE STONE. THEY SHALL NOT BE PLACED IN ROAD GUTTERS OR OVER TOP OF DRAIN INLETS THAT COULD WASH SAND FROM THEIR PILES.
- F. ONLY EQUIPMENT OR VEHICLES WITH RUBBER TIRES SHALL BE ALLOWED ON FINISH SURFACES FOR THE PURPOSES OF MOVING OR HAULING MATERIAL OR OTHER EQUIPMENT THAT MAY DAMAGE ANY FINISH MATERIAL AT ANY TIME.

1.7 SAMPLING AND TESTING

- A. SAMPLING:
  1. SAMPLING OF PAVERS SHALL BE CARRIED OUT AT THE TIME OF PACKAGING IN THE PLACE OF MANUFACTURE. ALTERNATIVELY, SAMPLING MAY BE UNDERTAKEN AT THE JOB SITE PROVIDED TEST RESULTS ARE PROVIDED TO THE CITY OF COLUMBUS TRANSPORTATION DIVISION A MINIMUM OF ONE WEEK PRIOR TO INCORPORATION INTO THE WORK. ALL MATERIALS REPRESENTED BY TESTS FALLING OUTSIDE OF THE SPECIFIED REQUIREMENTS SHALL BE REMOVED FROM SITE AT THE CONTRACTOR'S EXPENSE.
  2. FULL SIZE PAVERS OF EACH COLOR SHALL BE RANDOMLY SELECTED FROM APPROXIMATELY EQUAL SECTIONS OF THE CONSIGNMENT TO SUIT TESTING FREQUENCY.
  3. ALL PAVEMENT SAMPLES SHALL BE CLEARLY MARKED IN SUCH A WAY THAT THE DESIGNATED SECTION OF THE WORKS CAN BE IDENTIFIED.
  4. JOINTING BITUMINOUS SETTING BED AND BEDDING STONE SHALL BE SAMPLED FROM WITHIN THE STOCKPILES PRIOR TO DELIVERY TO THE SITE. SAMPLE SIZE AND FREQUENCY SHALL SUIT THE TESTING REQUIREMENTS.
  5. THE CITY OF COLUMBUS TRANSPORTATION DIVISION MAY ELECT TO UNDERTAKE ADDITIONAL SAMPLING, IN ACCORDANCE WITH DIVISION 1, ON MATERIALS DELIVERED TO THE SITE THAT THEY CONSIDER TO BE NON-COMPLIANT.
- B. TESTING:
  1. THE CITY OF COLUMBUS TRANSPORTATION DIVISION SHALL CONDUCT TESTING PER DIVISION 1 OF THE SPECIFICATIONS.
  - C. CLAY AND CONCRETE PAVEMENT TESTING:
    1. THE CONTRACTOR SHALL ENSURE THAT THE MANUFACTURER UNDERTAKES THE FOLLOWING TESTING AT THE SPECIFIED FREQUENCY PRIOR TO SHIPPING THE PAVERS.
      - A. CUMULATIVE DIMENSIONAL TESTING AT A RATE OF 1 SET OF TEST (24 PAVERS EACH) PER 25,000 PAVERS OR PART THEREOF.
      - B. INDIVIDUAL DIMENSIONS AND WARPAGE TESTING AT A RATE OF 1 SET OF TESTS (10 PAVERS EACH) PER 50,000 PAVERS OR PART THEREOF.
      - C. CONTINUOUS MONITORING AGAINST APPROVED COLOR AND TEXTURE SELECTION.
      - D. CONTINUOUS MONITORING FOR CHIPPED OR CRACKED CLAY PAVERS.
    2. THE CONTRACTOR SHALL ARRANGE FOR AN INDEPENDENT TESTING COMPANY, MEETING THE APPROVAL OF THE CITY OF COLUMBUS TRANSPORTATION DIVISION, TO UNDERTAKE THE FOLLOWING TESTING, IN ACCORDANCE WITH DIVISION 1.
      - A. COMPRESSIVE TESTING TO ASTM C-67 AT A RATE OF 1 SET OF TESTS (5 PAVERS EACH) PER 100,000 PAVERS OR PART THEREOF, WITH A MINIMUM OF ONE SET OF TESTS PER COLOR.
      - B. MODULUS OF RUPTURE TESTING TO ASTM C-67 AT A RATE OF 1 SET OF TESTS (10 PAVERS EACH) PER 200,000 PAVERS OR PART THEREOF, WITH A MINIMUM OF ONE SET OF TESTS PER COLOR.
      - C. WATER ABSORPTION TESTING TO ASTM C-67 AT A RATE OF 1 SET OF TESTS (10 PAVERS EACH) PER 200,000 PAVERS OR PART THEREOF, WITH A MINIMUM OF ONE SET OF TESTS PER COLOR.
      - D. STATIC COEFFICIENT OF FRICTION TESTING TO ASTM E-303 SHALL BE CARRIED OUT AT A RATE OF 1 SET OF TESTS (5 PAVERS EACH) PER 200,000 PAVERS OR PART THEREOF, WITH A MINIMUM OF ONE SET OF TEST PER COLOR AND ON THE COMPLETED PAVEMENT AT A RATE OF ONE TEST PER 10,000 SQUARE FEET.

1.8 FIELD SAMPLE/MOCK-UP

- A. GENERAL: CONSTRUCT A FIELD SAMPLE/MOCK-UP AT THE EARLIEST POSSIBLE TIME PRIOR TO PROCEEDING WITH THE INSTALLATION OF THE PAVING, IN ITS FINAL LOCATION AS AGREED TO BY THE CITY OF COLUMBUS TRANSPORTATION DIVISION. USE MATERIALS, METHODS AND WORKMANSHIP TO SHOW THE STANDARD OF APPEARANCE AND FINISH EXPECTED OF THE FINAL PAVING. THE SAMPLE SHALL BE AS LISTED IN THE TABLE BELOW AND SHALL INCLUDE ALL FEATURES ENCOUNTERED IN THE FINAL WORK.
  1. MEDIAN SAMPLE 3 FEET X 3 FEET BRICK PAVING AND CROSSWALK SAMPLE 5 FEET X 5 FEET.
  - B. APPROVAL: THE FIELD SAMPLE/MOCK-UP SHALL BE APPROVED BY THE CITY OF COLUMBUS TRANSPORTATION DIVISION BEFORE COMMENCEMENT OF PAVING WORK ON THE PROJECT. IF NECESSARY, REMOVE AND RECONSTRUCT THE FIELD SAMPLE/MOCK-UP UNTIL IT HAS BEEN APPROVED. APPROVAL BY THE CITY OF COLUMBUS TRANSPORTATION DIVISION SHALL NOT RELIEVE THE MANUFACTURER OR INSTALLER OF THEIR RESPONSIBILITIES AND OBLIGATIONS CONTAINED HEREIN.

2321 E

CALCULATED JMM	CHECKED HLM	<b>GENERAL NOTES</b>
FIFTH AVE. BETWEEN OLENTANGY RIVER RD. AND PERRY ST.		
SSI OVERALL TRAFFIC MANAGEMENT PLAN CITY OF COLUMBUS		
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 24px; font-weight: bold;">3</span> </div> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 24px; font-weight: bold;">22</span> </div>		

Drawing: K:\210105\05\11th East of Olentangy\210105\TMS\05.dwg View: W Saved on: 05-19-08 12:38 Plotted by: csm - L:scale: 1:00 - Plot: scale 1=1 1/8"=1'



C. STANDARD FOR WORK: THE APPROVED FIELD SAMPLE/MOCK-UP SHALL SERVE AS THE STANDARD OF ACCEPTANCE FOR THE PAVER WORK OF THIS SECTION. THE FIELD SAMPLE/MOCK-UP MAY BE INCORPORATED AS PART OF THE FINAL WORKS UPON AGREEMENT WITH THE CITY OF COLUMBUS TRANSPORTATION DIVISION. OTHERWISE IT SHALL BE DEMOLISHED AND REMOVED FROM SITE WHEN IT IS NO LONGER REQUIRED TO SERVE AS A STANDARD FOR THE WORKS. QUALITIES WHICH THE MOCK-UP SHALL DETERMINE INCLUDE JOINT SIZES, BRICK ALIGNMENT, DEVIATION OF SURFACES FROM BRICK TO BRICK, AND GENERAL OVERALL APPEARANCE OF FINISHED INSTALLATION.

PRODUCTS

2.1 CLAY PAVERS

A. PHYSICAL REQUIREMENTS: MINIMUM ASTM 902, CLASS SX, TYPE I, APPLICATION PX. COMPRESSIVE STRENGTH IS MINIMUM 7,500 PSI WITH 6,500 MINIMUM FOR INDIVIDUAL PAVER. MODULUS OF RUPTURE ASTM C-67. AVERAGE WATER ABSORPTION 6% OR LESS. STATIC COEFFICIENT OF FRICTION ASTM-E-303.06.

1. THE PAVERS SHALL BE SOLID UNITS WITHOUT CORE HOLES OR OTHER PERFORATIONS.

2. ALL PAVERS SHALL BE FREE FROM DEFECTS THAT WOULD INTERFERE WITH THE PROPER PLACING OF THE PAVERS OR IMPAIR THE STRENGTH OR PERFORMANCE THEREOF. THE EXTENT OF CHIPPING SHALL COMPLY WITH ASTM C-1272 EXCEPT THAT IT SHALL BE MEASURED FROM THE VERTICAL FACES OF THE PAVERS, AND DIMENSIONS SHALL INCLUDE THE CHAMFER.

B. ACCEPTABLE CLAY PAVER MANUFACTURERS: SEE FINISH SCHEDULE AND SHALL INCLUDE, BUT NOT BE LIMITED TO:

1. BELDEN BRICK COMPANY  
C. DIMENSIONS AND PERMISSIBLE VARIATIONS:

1. THE PAVERS SHALL BE MANUFACTURED SUCH THAT THE MODULE SIZE FROM CENTER OF JOINT TO CENTER OF JOINT SHALL HAVE A NOMINAL LENGTH OF 8 INCHES AND A NOMINAL WIDTH OF 4 INCHES.

2. THE THICKNESS OF THE PAVER SHALL BE AS SHOWN ON THE DRAWINGS AND SHALL BE A NOMINAL THICKNESS OF 2-1/4" INCHES FOR THE MEDIAN AND 3 INCHES FOR THE CROSSWALK.

3. CLAY PAVERS MAY NOT BE PROVIDED WITH CHAMFERS ON EDGES OF THE TOP SURFACE. THE CORNERS SHALL NOT EXHIBIT DEFORMATION AS A RESULT OF THE CHAMFERING PROCESS.

4. THE PAVERS MAY NOT BE PROVIDED WITH SPACER BARS ON AT LEAST TWO SIDE FACES OF THE PAVER WHEN PLACED ON A BITUMINOUS SETTING BED. IF PRESENT, THE SPACERS SHALL PROTRUDE FROM THE FACE BY 1/16 INCH TO 1/8 INCH. SPACER BARS SHALL BE LOCATED SO THAT THEY DO NOT CORRESPOND TO THOSE ON ADJACENT PAVERS WHEN LAID IN THE BOND PATTERNS USED IN THE WORK.

5. THE DIMENSIONS OF ALL PAVERS WHEN MEASURED FROM OUTSIDE FACE TO OUTSIDE FACE, IGNORING SPACERS, SHALL NOT DIFFER FROM THE NOMINAL SIZES SUCH THAT THE OVERALL MEASUREMENTS OF 24 PAVERS LAID IN CONTACT, IN A STRAIGHT LINE, IN IDENTICAL ORIENTATION, AND SHALL NOT FALL OUTSIDE THE FOLLOWING LIMITS.

A. LENGTH 15' 7-1/2" TO 15' 10-3/8"  
B. WIDTH 7'-9" TO 7'-9"-13/16"

6. THE CONCAVE OR CONVEX WARPAGE OF EXPOSED SURFACES OR EDGES SHALL NOT EXCEED 3/32 INCH IN 6 INCH WHEN MEASURED IN ACCORDANCE WITH ASTM C-67

7. THE OUT OF SQUARE MEASUREMENT OF THE PAVERS SHALL NOT EXCEED 3/32 INCH.

D. COLOR: THE COLOR RANGE OF THE PAVERS SHALL BE AS SUBMITTED TO AND APPROVED BY THE ARCHITECT.

E. RECORDS: THE CONTRACTOR SHALL ENSURE THAT THE MANUFACTURER MAINTAINS A PRODUCTION RECORD SHOWING BATCH NUMBERS AND DATE OF MANUFACTURE. THE PRODUCT SHALL BE MARKED WITH THE BATCH NUMBER ON THE PACKAGING FOR IDENTIFICATION.

2.2 BEDDING STONE

A. MATERIAL: THE BEDDING STONE SHALL CONFORM WITH THE REQUIREMENTS OF ASTM C-33 EXCEPT FOR THE GRADING REQUIREMENTS, THE STONE SHALL BE CLEAN, NATURALLY OCCURRING LIMESTONE WITH SUB-ANGULAR PARTICLES. SIZE CRUSHED #9 STONE.

B. TESTING:

1. THE CITY OF COLUMBUS SHALL CONDUCT TESTING PER DIVISION 1 OF THE SPECIFICATIONS.

C. CLAY AND CONCRETE PAVER TESTING:

1. THE CONTRACTOR SHALL ENSURE THAT THE MANUFACTURER UNDERTAKES THE FOLLOWING TESTING AT THE SPECIFIED FREQUENCY PRIOR TO SHIPPING THE PAVERS.

A. CUMULATIVE DIMENSIONAL TESTING AT A RATE OF 1 SET OF TEST (24 PAVERS EACH) PER 25,000 PAVERS OR PART THEREOF.

B. INDIVIDUAL DIMENSIONS AND WARPAGE TESTING AT A RATE OF 1 SET OF TESTS (10 PAVERS EACH) PER 50,000 PAVERS OR PART THEREOF.

C. CONTINUOUS MONITORING AGAINST APPROVED COLOR AND TEXTURE SELECTION.

D. CONTINUOUS MONITORING FOR CHIPPED OR CRACKED CLAY PAVERS.

2. THE CONTRACTOR SHALL ARRANGE FOR AN INDEPENDENT TESTING COMPANY, MEETING THE APPROVAL OF THE CITY OF COLUMBUS TRANSPORTATION DIVISION, TO UNDERTAKE THE FOLLOWING TESTING, IN ACCORDANCE WITH DIVISION 1.

A. COMPRESSIVE TESTING TO ASTM C-67 AT A RATE OF 1 SET OF TESTS (5 PAVERS EACH) PER 100,000 PAVERS OR PART THEREOF, WITH A MINIMUM OF ONE SET OF TESTS PER COLOR.

B. MODULUS OF RUPTURE TESTING TO ASTM C-67 AT A RATE OF 1 SET OF TESTS (10 PAVERS EACH) PER 200,000 PAVERS OR PART THEREOF, WITH A MINIMUM OF ONE SET OF TESTS PER COLOR.

C. WATER ABSORPTION TESTING TO ASTM C-67 AT A RATE OF 1 SET OF TESTS (10 PAVERS EACH) PER 200,000 PAVERS OR PART THEREOF, WITH A MINIMUM OF ONE SET OF TESTS PER COLOR.

D. STATIC COEFFICIENT OF FRICTION TESTING TO ASTM E-303 SHALL BE CARRIED OUT AT A RATE OF 1 SET OF TESTS (5 PAVERS EACH) PER 200,000 PAVERS OR PART THEREOF, WITH A MINIMUM OF ONE SET OF TEST PER COLOR AND ON THE COMPLETED PAVEMENT AT A RATE OF ONE TEST PER 10,000 SQUARE FEET.

2.2 BITUMINOUS SETTING BED

A. NEOPRENE-MODIFIED ASPHALT -FURNISH NEOPRENE-MODIFIED ASPHALT ADHESIVE THAT CONTAINS 2% NEOPRENE, GRADE WMI OXIDIZED ASPHALT WITH A 150 DEGREE SOFTENING POINT (77 PENETRATION), AND 10% LONG FIBERED INERT MATERIAL AS SUPPLIED BY (OR APPROVED EQUAL):

SEIDEL COMPANY, INC.  
11 MARKET SQUARE 410 LAKEVILLE RD.  
NEWBURYPORT, MASSACHUSETTS 01950  
617.649.6740  
HASTINGS PAVEMENT COMPANY, INC.  
LAKE SUCCESS, NEW YORK 11042  
516.379.3500

3.1 PREPARATION

A. METHODOLOGY: THE INSTALLER'S METHOD STATEMENT SHALL BE A DETAILED NARRATIVE DESCRIBING ALL ASPECTS OF PAVER INSTALLATION. IT MUST INCLUDE BUT NOT BE LIMITED TO INDICATING THE PROPOSED STARTING POINTS, DIRECTION OF OPERATIONS AND PROGRESS OF WORKS, THE PATTERN DIMENSIONAL CONTROLS TO BE USED AND THE PERSONNEL AND EQUIPMENT TO BE KEPT ON SITE AT ALL TIMES.

B. SUBSTRATE: THE CONTRACTOR SHALL INSPECT THE SUBSTRATE WITH THE INSTALLER AND THE CITY OF COLUMBUS TRANSPORTATION DIVISION TO ENSURE THAT IT MEETS THE GRADE REQUIREMENTS FOR PROPER INSTALLATION AND THAT THE AREA IS FREE FROM STANDING WATER, DEBRIS OR OBSTRUCTIONS PRIOR TO COMMENCING PAVER INSTALLATION. THE CONTRACTOR SHALL RECTIFY ANY DEVIATIONS IN THE UNDERLYING SURFACE LEVELS GREATER THAN PLUS OR MINUS 1/4 INCH OR OTHER DEFICIENCIES IF AND WHEN THEY OCCUR, AND SHALL NOT PERMIT THE INSTALLER TO CONTINUE PAVING THESE AREAS UNTIL THEY ARE RECTIFIED.

C. PROFILES: LINES AND GRADES SHOWN ON THE DRAWINGS SHALL BE ESTABLISHED AND MAINTAINED DURING THE INSTALLATION OF THE SURFACE COURSE.

D. CLEANING: BEFORE INSTALLATION OF EACH SECTION OF PAVING, THE SUBSTRATE SHALL BE CLEANED TO REMOVE ANY LOOSE MATERIAL.

3.2 SEQUENCING

A. EDGE RESTRAINTS: ALL EDGE FEATURES INCLUDING CURBS, HEADERS AND PLANTERS SHALL BE INSTALLED PRIOR TO PLACING THE STONE SETTING LAYER.

B. PENETRATIONS: ALL SURROUNDS, PLINTHS AND FOUNDATIONS FOR ALL SIGNS, STREET FURNITURE AND UTILITY COVERS SHALL BE INSTALLED PRIOR TO INSTALLATION OF THE PAVERS. GAPS AND CRACKS BETWEEN SURFACES SHALL BE CAULKED TO MINIMIZE BEDDING STONE MIGRATION.

C. TACK COAT: ALL EDGE FEATURES, ELECTRICAL CONDUIT AND OTHER SURFACE PENETRATIONS SHALL BE SUITABLY PROTECTED PRIOR TO APPLICATION OF THE TACK COAT AND BITUMINOUS SETTING LAYER, IF INSTALLED.

3.3 INSTALLATION OF CLAY AND PRECAST CONCRETE PAVERS ON STONE SETTING BED

A. GEOTEXTILE: PLACE GEOTEXTILE AT EDGE RESTRAINTS AND CONCRETE SLAB JOINTS WHERE DEPICTED ON THE DRAWINGS, AND AT OTHER LOCATIONS AS NECESSARY TO PREVENT STONE LOSS PRIOR TO SPREADING BEDDING AGGREGATE.

B. TEMPORARY EDGE RESTRAINTS: TEMPORARY EDGE RESTRAINTS SHALL BE ADEQUATE TO PREVENT MOVEMENT OF THE PAVERS AS A RESULT OF CONSTRUCTION OPERATIONS AND OTHER TRAFFIC.

C. BEDDING COURSE STONE:

1. THE BEDDING STONE SHALL BE SPREAD OVER THE AREAS TO BE CONSTRUCTED TO CREATE AN UNCOMPACTED LOOSE SURFACE ONTO WHICH THE PAVERS SHALL BE PLACED. THE LAYING COURSE SHALL BE SUCH THAT AFTER COMPACTION IT FORMS A UNIFORM LAYER NOMINALLY ONE INCH THICK. UPON COMPLETION OF THE WORKS THE FINAL SURFACE OF THE PAVERS SHALL BE 1/8 INCH TO 1/4 INCH ABOVE ADJACENT FINISHES AT THE LOW EDGE AND FLUSH TO 1/16 INCH MAX ABOVE FINISHES AT THE HIGH EDGE

2. BEDDING STONE SHALL BE LAID TO A TOLERANCE OF PLUS OR MINUS 3/16 INCH ALLOWING FOR THE CORRECT SURCHARGE. WHERE DISTANCES BETWEEN SCREED RAILS EXCEED 12 FT. INTERVALS AN INTERMEDIATE RAIL SHALL BE SET TO LINE AND LEVEL. SCREED RAILS SHALL BE USED AT 4 FT. CENTERS WHERE GRADE CHANGES OCCUR.

3. THE SCREEDDED BEDDING STONE SHALL NOT BE SUBJECTED TO ANY TRAFFIC BY EITHER MECHANICAL OR PEDESTRIAN USE.

4. SUFFICIENT STONE SHALL BE PLACED TO ENSURE THAT NO DELAY OCCURS TO PAVER LAYING. THE STONE SHOULD BE KEPT MOIST AS NECESSARY BY LIGHTLY MISTING WITH WATER SO AS NOT TO DISTURB THE SCREEDDED SURFACE. BEDDING STONE THAT HAS BEEN SCREEDDED BUT NOT COVERED WITH PAVERS AT THE END OF EACH DAYS WORK SHALL BE TAKEN UP AND RE-SCREEDDED PRIOR TO RE-COMMENCEMENT.

5. THE VOIDS LEFT AFTER THE REMOVAL OF SCREED RAILS SHALL BE FILLED WITH LOOSE STONE AS THE LAYING OF PAVERS PROCEEDS.

6. SPREADING OF THE LAYING COURSE STONE SHALL STOP WHEN WEATHER CONDITIONS ARE UNSUITABLE. IF INCLEMENT WEATHER CAUSES DETERIORATION OF THE BITUMINOUS SETTING BED IT SHALL BE LIFTED AND STORED TO ONE SIDE TO DRAIN BEFORE ITS REUSE.

D. CLAY AND CONCRETE PAVERS:

1. METAL WHEELED PALLET JACKS SHALL NOT BE PERMITTED TO BE USED FOR ANY REASON AT ANYTIME OVER TOP OF NEWLY INSTALLED BRICK, CONCRETE PAVERS, OR CONCRETE. ONLY LIFT EQUIPMENT WITH RUBBER TIRES WILL BE PERMITTED TO MOVE ACROSS IN-PLACE FINISH MATERIALS.

2. LAY PAVERS HAND TIGHT IN THE PATTERNS AS DEPICTED ON THE DRAWINGS AND PER THE APPROVED MOCK-UP. THE SIDE OF THE CLAY PAVER WITH SPACERS, IF PRESENT, SHALL ALWAYS FACE TO THE SOUTH AND WEST.

3. THE PAVERS SHALL BE LAID AWAY FROM AN EDGE RESTRAINT OR THE EXISTING LAYING FACE IN SUCH A MANNER AS TO ENSURE SQUARENESS OF PATTERN. CUT HEADER COURSE PAVERS TO ACCOMMODATE ALIGNMENT AT CURBS OR OTHER PERMANENT EDGE RESTRAINTS.

4. SLIVERS OF CUT PAVERS OF 1-1/2" OR LESS WILL NOT BE ACCEPTABLE AT CURBS OR OTHER PERMANENT EDGE RESTRAINTS.

5. FULL PAVERS SHALL BE LAID FIRST. FOR CLAY PAVERS FOLLOW THE MANUFACTURER'S RECOMMENDATIONS ON COLOR BLENDING.

6. CUT PAVERS SHALL BE LAID TO FILL THE EDGES BETWEEN THE LAYING PATTERN AND THE EDGE RESTRAINT. PRIOR TO MARKING AND CUTTING PAVERS, THE ADJACENT PAVERS SHALL BE TIGHTENED TO ACCEPTABLE TOLERANCES.

7. FIT PAVERS TO CONDITIONS OF SURFACE PENETRATIONS, UTILITY COVERS AND PLANTERS. MAINTAIN SPECIFIED JOINT WIDTHS THROUGHOUT. WET SAWS ARE TO BE USED IN THE OPERATION AND THEY SHALL BE OF SUFFICIENT SIZE, QUALITY, AND STURDINESS AS TO ENSURE THE PROPER CUTTING OF PAVERS TO ACHIEVE TOLERANCES LISTED. THE SETUP AREA FOR WET SAWS SHALL BE LOCATED IN AN AREA WHICH DEBRIS FROM THE SAWING OPERATION SHALL NOT STAIN, CONTAMINATE, OR OTHERWISE SOIL SURFACES OF COMPLETED WORK, EITHER FROM THE SETTLING OF SAWDUST OR FROM THE RUNOFF OF THE SAWDUST ONTO FINISH WORK. SAW CUT PAVERS ON BOTH SIDES IN A "KEystone" SHAPE TO MAINTAIN RADII AS FOLLOWS:

A. RADII UP TO 5 FT. CUT EVERY PAVER,  
B. RADII 5 TO 10 FT. CUT EVERY SECOND PAVER,  
C. RADII 10 TO 15 FT. CUT EVERY THIRD PAVER,  
D. RADII 15 TO 25 FT. CUT EVERY FIFTH PAVER,  
E. RADII OVER 25 FT. NO CUTTING REQUIRED.

8. MODIFY PAVER PATTERN AND/OR PROVIDE ADDITIONAL CUTS TO ADJACENT PAVERS AS NECESSARY WHEN THE CUTTING OF A PAVER WILL RESULT IN LESS THAN ONE THIRD OF A FULL PAVER. ALL CUT PAVER FACES TO BE VERTICAL, TOP EDGES SHALL BE FREE FROM CHIPS AND PATTERN MODIFICATION/ADDITIONAL CUTS SHALL BE AS ACCEPTABLE TO THE ARCHITECT.

9. AT THE END OF THE LAYING PERIOD, THE PAVERS SHALL BE ADJUSTED TO FORM STRAIGHT PATTERN LINES AND UNIFORM JOINTS. THE MAXIMUM DEVIATION FROM A 30 FT. STRING LINE SHALL BE +/- 1/4 INCH. THE MAXIMUM JOINT WIDTH SHALL NOT EXCEED TWICE THE MANUFACTURER'S MATERIAL TOLERANCE FOR LENGTH AND WIDTH.

10. IF WEATHER CONDITIONS ARE SUCH THAT THE PERFORMANCE OF THE PAVEMENT MAY BE COMPROMISED, LAYING OPERATIONS SHALL BE DISCONTINUED AND ALL LAID PAVERS SHALL BE ALIGNED AND COMPACTED PRIOR TO SUSPENSION OF THE WORKS.

11. ON RECOMMENCEMENT OF LAYING OPERATIONS THE EDGE TWO COURSES OF EXISTING PAVING SHALL BE LIFTED AND THE BITUMINOUS SETTING SHALL BE RESET BEFORE FURTHER PAVERS ARE LAID.

E. COMPACTION:

1. AT THE END OF EACH DAY, AFTER THE PAVERS HAVE BEEN ALIGNED, AND CUT PAVERS INCORPORATED AT EDGE RESTRAINTS AND BETWEEN LANES, THE PAVERS SHALL BE COMPACTED

2. THE PAVEMENT SHALL BE COMPACTED USING A LOW AMPLITUDE PLATE COMPACTOR WITH A PLATE AREA OF NOT LESS THAN 2-1/2 SQ. FT. TRANSMITTING AN EFFECTIVE FORCE OF NOT LESS THAN 11 PSI AT A FREQUENCY OF 80 -100 HZ. THE INSTALLER SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THE PAVER. COMPACTION SHALL BE PERMITTED WITHIN 4 FT. OF AN UNRESTRAINED EDGE. PAVERS DAMAGED FROM COMPACTION SHALL BE LIFTED, REPLACED, & RECOMPACTED.

3. ON COMPLETION OF VIBRATION, BEFORE AND AFTER JOINT FILLING, SURFACE TOLERANCES SHALL BE WITHIN 3/16 IN. UNDER A 10 FT. STRAIGHT EDGE AND PLUS 1/4 IN. TO MINUS 1/8 IN. FROM FINISHED ELEVATION. THERE SHALL NOT BE A DIFFERENCE IN ELEVATION BETWEEN ADJACENT UNITS OF GREATER THAN 1/16 IN. ELEVATIONS SHOULD BE SUCH THAT NO WATER PONDS ON THE SURFACE.

3.4 PAVERS ON BITUMINOUS SETTING BED

A. PROTECTION:

1. PROTECT WORK FROM DAMAGE, DISCOLORATION, DETERIORATION AND THEFT UNTIL COMPLETION.

2. ALL VEHICLES AND EQUIPMENT OPERATING ON THE COMPLETED PAVERS SHALL BE MAINTAINED IN A CLEAN CONDITION, SO THAT OIL, TAR, RUBBER OR OTHER MATTER IS NOT DEPOSITED ON THE SURFACE OF THE PAVERS OR ADJACENT PAVING FEATURES. ANY PAVERS EXHIBITING NOTICEABLE SCRATCHES SHALL BE REPLACED. THE RESPONSIBLE CONTRACTOR SHALL CLEAN OR REPLACE PAVERS THAT ARE AFFECTED BY HIS OPERATION.

B. CLEAN UP:

1. ALL MATERIALS GENERATED BY CONSTRUCTION WORK IN THIS SECTION SHALL BE REMOVED AT THE END OF EACH SECTION OF THE WORK AND THE SITE SHALL BE LEFT IN A CLEAN AND SAFE CONDITION.

2. AFTER COMPLETION OF ANY REPAIR WORK, CLEAN ALL EXPOSED SURFACES WITH CLEAN WATER AND STIFF NON-METAL BRUSHES UNTIL ALL STAINS AND DIRT ARE REMOVED. USE ONLY CLEANING SOLUTIONS THAT ARE RECOMMENDED BY THE PAVER AND STABILIZER MANUFACTURERS. WIRE BRUSHES SHALL NOT BE USED.

3.5 MAINTENANCE

A. INSPECTION: UNDERTAKE AN INSPECTION OF THE PAVER SURFACE WITH THE INSTALLER AND THE OWNER'S REPRESENTATIVE AND RECTIFY ALL NOTED DEFECTS PRIOR TO HANDOVER.

B. REPAIRS: REPAIR OR REPLACE ANY DAMAGED WORK TO ORIGINAL SPECIFIED CONDITION PRIOR TO HANDOVER.

C. MAINTENANCE:

1. THE CONTRACTOR SHALL ARRANGE FOR THE INSTALLER TO RETURN TO THE SITE OVER A PERIOD OF ONE YEAR FROM ACCEPTANCE AND AT LEAST AT QUARTERLY INTERVALS, AS DIRECTED THE OWNER'S REPRESENTATIVE, TO RECTIFY ANY PROBLEMS IN THE WORK CAUSED BY HIS FAILURE AT NO COST TO THE JOB TO ADEQUATELY ALIGN OR BOND THE PAVERS, COMPACT THE BITUMINOUS SETTING BED OR FILL THE JOINTS.

2. WHERE LATERAL DISPLACEMENT OF THE BITUMINOUS SET PAVERS HAS OCCURRED ADJACENT TO EDGE RESTRAINTS THE CUT PAVERS SHALL BE REPLACED WITH NEW PAVERS OF THE CORRECT SIZE TO COMPLY WITH THE SPECIFIED JOINT WIDTHS.

ARCHITECTURAL CAST STONE (ALT. 2)

PART 1 - GENERAL

1.1 SECTION INCLUDES: ARCHITECTURAL CAST STONE.

1.2 RELATED SECTIONS

A. SECTION 04065 - MORTAR AND MASONRY GROUT.  
B. SECTION 04810 - UNIT MASONRY ASSEMBLIES.  
C. SECTION 04820 - REINFORCED UNIT MASONRY ASSEMBLIES.  
D. SECTION 07900 - JOINT SEALERS.  
E. SECTION 09960 - HIGH PERFORMANCE COATINGS.

1.3 REFERENCES

A. ACI 318 - BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.  
B. ASTM A 615/A 615M - STANDARD SPECIFICATION FOR DEFORMED AND PLAIN BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT.  
C. ASTM C 33 - STANDARD SPECIFICATION FOR CONCRETE AGGREGATES.  
D. ASTM C 150 - STANDARD SPECIFICATION FOR PORTLAND CEMENT.  
E. ASTM C 270 - STANDARD SPECIFICATION FOR MORTAR FOR UNIT MASONRY.

F. ASTM C 494 - STANDARD SPECIFICATION FOR CHEMICAL ADMIXTURES FOR CONCRETE.  
G. ASTM C 642 - STANDARD TEST METHOD FOR SPECIFIC GRAVITY, ABSORPTION, AND VOIDS IN HARDENED CONCRETE.  
H. ASTM C 979 - STANDARD SPECIFICATION FOR PIGMENTS FOR INTEGRALLY COLORED CONCRETE.  
I. ASTM C 1194 - STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF ARCHITECTURAL CAST STONE.

J. ASTM C 1195 - STANDARD TEST METHOD FOR ABSORPTION OF ARCHITECTURAL CAST STONE.  
K. ASTM C 1364 - STANDARD SPECIFICATION FOR ARCHITECTURAL CAST STONE.

L. ASTM D 2244 - STANDARD TEST METHOD FOR CALCULATION OF COLOR DIFFERENCES FROM INSTRUMENTALLY MEASURED COLOR COORDINATES.  
M. CAST STONE INSTITUTE TECHNICAL MANUAL.

1.4 DEFINITIONS

A. CAST STONE: HIGHLY REFINED ARCHITECTURAL CONCRETE STONE PRODUCT MANUFACTURED TO SIMULATE FINE GRAIN TEXTURE OF NATURAL STONE.  
B. VIBRANT DRY TAMP (VDT) CASTING METHOD: VIBRATORY RAMMING OF DAMP, ZERO-SLUMP CONCRETE AGAINST RIGID FORMWORK UNTIL IT IS DENSELY COMPACTED AND READY FOR IMMEDIATE REMOVAL FROM FORM.

1.5 SUBMITTALS

A. COMPLY WITH SECTION 01330 - SUBMITTAL PROCEDURES.  
B. PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA.  
C. SHOP DRAWINGS: SUBMIT MANUFACTURER'S SHOP DRAWINGS INCLUDING PROFILES, CROSS SECTIONS, REINFORCEMENT, EXPOSED FACES, ARRANGEMENT OF JOINTS, ANCHORING METHODS, ANCHORS, ANNOTATION OF COMPONENTS, AND THEIR LOCATIONS IN PROJECT AS INDICATED ON THE DRAWINGS.  
D. VERIFICATION SAMPLES: SUBMIT PIECES OF ACTUAL CAST STONE COMPONENTS, 12" (305 MM) SQUARE, ILLUSTRATING RANGE OF COLOR AND TEXTURE TO BE ANTICIPATED IN COMPONENTS FURNISHED FOR PROJECT.

E. TEST RESULTS: SUBMIT MANUFACTURER'S TEST RESULTS OF CAST STONE COMPONENTS MADE PREVIOUSLY BY MANUFACTURER USING MATERIALS FROM SAME SOURCES PROPOSED FOR USE IN PROJECT.

1.6 QUALITY ASSURANCE  
A. MANUFACTURER QUALIFICATIONS: A CURRENT PRODUCER MEMBER OF CAST STONE INSTITUTE, WITH A MINIMUM OF 10 YEARS OF EXPERIENCE IN PRODUCING CAST STONE OF TYPES REQUIRED FOR PROJECT.

1. PLANT SHALL HAVE ADEQUATE CAPACITY TO FURNISH QUALITY, SIZES, AND QUANTITY OF CAST STONE REQUIRED WITHOUT DELAYING PROGRESS OF THE WORK.  
2. PRODUCTS PREVIOUSLY PRODUCED BY PLANT AND EXPOSED TO WEATHER SHALL EXHIBIT SATISFACTORY APPEARANCE.

B. STANDARDS: COMPLY WITH REQUIREMENTS OF CAST STONE INSTITUTE TECHNICAL MANUAL.  
C. MOCK-UP: PROVIDE FULL SIZE CAST STONE COMPONENTS FOR INSTALLATION IN MOCK-UP OF EXTERIOR WALL. APPROVED MOCK-UP WILL BECOME STANDARD FOR APPEARANCE AND WORKMANSHIP.

1. MOCK-UP SHALL REMAIN AS PART OF THE COMPLETED WORK.  
DELIVERY, STORAGE, AND HANDLING  
A. DELIVERY:

1. DELIVER CAST STONE COMPONENTS SECURED TO SHIPPING PALLETS AND PROTECTED FROM DAMAGE AND DISCOLORATION.  
2. PROTECT CORNERS FROM DAMAGE.  
3. NUMBER EACH PIECE INDIVIDUALLY TO MATCH SHOP DRAWINGS AND SCHEDULES.

B. STORAGE:

1. STORE CAST STONE COMPONENTS AND INSTALLATION MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.  
2. STORE CAST STONE COMPONENTS ON PALLETS WITH NON-STAINING, WATERPROOF COVERS.  
3. VENTILATE UNDER COVERS TO PREVENT CONDENSATION.  
4. PREVENT CONTACT WITH DIRT.

2321 E

CALCULATED  
JMM  
CHECKED  
HLM

GENERAL NOTES  
FIFTH AVE. BETWEEN OLENTANGY RIVER RD. AND PERRY ST.

SSI OVERALL TRAFFIC MANAGEMENT PLAN  
CITY OF COLUMBUS

4  
22



Drawing: K:\210101\05\15th East of Olenangy\210101\15th East of Olenangy.dwg View: W Saved on: 05-19-08 12:38 Plotted by: cdm -L:Scale: 1:00 -Plot: scale 1=1 105/PS

- C. HANDLING: PROTECT CAST STONE COMPONENTS DURING HANDLING AND INSTALLATION TO PREVENT CHIPPING, CRACKING, OR OTHER DAMAGE.
- 1.8 SCHEDULING
  - A. SCHEDULE AND COORDINATE PRODUCTION AND DELIVERY OF CAST STONE COMPONENTS WITH UNIT MASONRY WORK TO OPTIMIZE ON-SITE INVENTORY AND TO AVOID DELAYING THE WORK.
- PART 2 - PRODUCTS
- 2.1 MANUFACTURER
  - A. CONTINENTAL CAST STONE: WEB SITE: WWW.CONTINENTALCASTSTONE.COM E-MAIL: INFO@CONTINENTALCASTSTONE.COM, OR SIMILAR. ARCHITECTURAL CAST STONE
- 2.2 CAST STONE: ASTM C 1364.
  - A. CAST STONE: ASTM C 1364.
    - 1. CASTING METHOD: VIBRANT DRY TAMP.
    - 2. COMPRESSIVE STRENGTH, ASTM C 1194: 6,500 PSI (44.8 MPA) MINIMUM AT 28 DAYS.
    - 3. ABSORPTION, ASTM C 642 OR C 1195: 6 % MAXIMUM AT 28 DAYS.
  - B. SURFACE TEXTURE:
    - 1. FINE GRAINED TEXTURE, SIMILAR TO NATURAL STONE.
    - 2. NO BUGHOLES, AIR VOIDS, OR OTHER SURFACE BLEMISHES.
  - C. COLOR AND FINISH:
    - 1. CONTINENTAL CAST STONE COLOR NO.: 1100 WHITESTONE
  - D. COLOR VARIATION:
    - 1. VIEWING CONDITIONS: COMPARE IN DIRECT DAYLIGHT AT 10' (3 M), BETWEEN COMPONENTS OF SIMILAR AGE, SUBJECTED TO COMPARABLE WEATHERING CONDITIONS.
    - 2. MAXIMUM VARIATION, ASTM D 2244:
  - A. HUE: 2 UNITS.
  - B. LIGHTNESS, CHROMA, AND HUE COMBINED: 6 UNITS.
- 2.3 CAST STONE MATERIALS
  - A. PORTLAND CEMENT: ASTM C 150, TYPE I, WHITE OR GRAY AS REQUIRED TO MATCH SPECIFIED COLOR
  - B. COARSE AGGREGATE: ASTM C 33, EXCEPT FOR GRADATION; GRANITE, QUARTZ, OR LIMESTONE.
  - C. FINE AGGREGATE: ASTM C 33, EXCEPT FOR GRADATION; NATURAL OR MANUFACTURED SANDS.
  - D. PIGMENTS: ASTM C 979, INORGANIC IRON OXIDES.
  - E. ADMIXTURES:
    - 1. ASTM C 494.
    - 2. INTEGRAL WATER REPELLENTS AND OTHER CHEMICALS FOR WHICH NO ASTM STANDARD EXIST. PREVIOUSLY ESTABLISHED AS SUITABLE FOR USE IN CONCRETE BY PROVEN FIELD PERFORMANCE OR THROUGH LABORATORY TESTING.
  - F. WATER: POTABLE.
  - G. REINFORCING BARS: ASTM A 615/A 615M, GALVANIZED OR EPOXY COATED.
- 2.4 MORTAR MATERIALS
  - A. MORTAR: ASTM C 270, TYPE N.
- 2.5 ACCESSORIES
  - A. ANCHORS: NON-CORROSIVE TYPE, SIZED FOR CONDITIONS. HOT-DIP GALVANIZED STEEL.
  - B. SEALANT: AS SPECIFIED IN SECTION 07900.
  - C. CLEANER:
    - 1. MANUFACTURER'S STANDARD-STRENGTH, GENERAL-PURPOSE CLEANER DESIGNED FOR REMOVING MORTAR AND GROUT STAINS, EFFLORESCENCE, AND OTHER CONSTRUCTION STAINS FROM NEW MASONRY SURFACES WITHOUT DISCOLORING OR DAMAGING MASONRY SURFACES.
    - 2. EXPRESSLY APPROVED FOR INTENDED USE BY CAST STONE MANUFACTURER AND EXPRESSLY APPROVED BY CLEANER MANUFACTURER FOR USE ON CAST STONE AND USE ON CAST STONE AND ADJACENT MASONRY MATERIALS.
- 2.6 FABRICATION
  - A. SHAPES: UNLESS OTHERWISE INDICATED ON DRAWINGS, PROVIDE:
    - 1. SUITABLE WASH ON EXTERIOR SILLS, COPINGS, PROJECTING COURSES, AND COMPONENTS WITH EXPOSED TOP SURFACES.
    - 2. DRIPS ON PROJECTING COMPONENTS, WHEREVER POSSIBLE.
  - B. REINFORCEMENT:
    - 1. AS REQUIRED TO WITHSTAND HANDLING AND STRUCTURAL STRESSES.
    - 2. COMPLY WITH ACI 318.
    - 3. MINIMUM OF 0.25 % OF CROSS-SECTIONAL AREA OF PANELS WHICH EXCEED 12" (305 MM) IN WIDTH.
    - 4. MINIMUM REINFORCING COVER: TWICE DIAMETER OF REINFORCING BARS.
  - C. CURING:
    - 1. CURE CAST STONE COMPONENTS WITH A DIRECT FIRED STEAM GENERATOR AT A MINIMUM TEMPERATURE OF 105 DEG. F (41 DEG. C) FOR A MINIMUM OF 6 HOURS, WITHIN 12 HOURS OF FABRICATION.
    - 2. CURE CAST STONE COMPONENTS IN PRESENCE OF CARBON MONOXIDE AND CARBON DIOXIDE TO PROMOTE CARBONATION AT SURFACE, TO MINIMIZE EFFLORESCENCE.
  - D. FINISHING: REMOVE CEMENT FILM FROM EXPOSED SURFACES BEFORE PACKAGING FOR SHIPMENT.
  - E. TOLERANCES: FABRICATE CAST STONE COMPONENTS WITHIN TOLERANCES IN ACCORDANCE WITH CAST STONE INSTITUTE TECHNICAL MANUAL, UNLESS OTHERWISE SPECIFIED.
    - 1. DIMENSIONS: PLUS OR MINUS 1/8" (3 MM).
    - 2. MAXIMUM BOW, CAMBER, OR TWIST: LENGTH/360
- 2.7 SOURCE QUALITY CONTROL
  - A. TESTING: TEST COMPRESSIVE STRENGTH AND ABSORPTION OF SPECIMENS SELECTED AT RANDOM FROM PLANT PRODUCTION. FROM PLANT PRODUCTION.
    - 1. TEST IN ACCORDANCE WITH REFERENCED TESTING STANDARDS.
    - 2. SELECT SAMPLES AT RATE OF 3 PER 500CF (14 M3), WITH A MINIMUM OF 3 PER PRODUCTION WEEK.

- PART 3 - EXECUTION
- 3.1 EXAMINATION
  - A. EXAMINE CONSTRUCTION TO RECEIVE CAST STONE COMPONENTS. NOTIFY ARCHITECT IF CONSTRUCTION IS NOT ACCEPTABLE. DO NOT BEGIN INSTALLATION UNTIL UNACCEPTABLE CONDITIONS HAVE BEEN CORRECTED.
  - B. EXAMINE CAST STONE COMPONENTS FOR FIT AND FINISH BEFORE INSTALLATION. DO NOT INSTALL UNACCEPTABLE COMPONENTS.
- 3.2 INSTALLATION
  - A. GENERAL: INSTALL CAST STONE COMPONENTS IN CONJUNCTION WITH MASONRY, COMPLYING WITH REQUIREMENTS OF SECTION 04810.
  - B. SETTING:
    - 1. DRENCH CAST STONE COMPONENTS WITH CLEAR, RUNNING WATER IMMEDIATELY BEFORE INSTALLATION. DO NOT USE PRY BARS OR OTHER EQUIPMENT IN A MANNER THAT COULD DAMAGE CAST STONE COMPONENTS.
    - 2. FILL DOWEL HOLES AND ANCHOR SLOTS COMPLETELY WITH MORTAR OR NON-SHRINK GROUT.
    - 3. SET CAST STONE COMPONENTS IN A FULL BED OF MORTAR, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
    - 4. FILL VERTICAL JOINTS WITH MORTAR.
    - 5. MAKE JOINTS 3/8" (9 MM), UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
    - 6. LEAVE HEAD JOINTS IN COPINGS AND SIMILAR COMPONENTS OPEN FOR SEALANT.
    - 7. RAKE MORTAR JOINTS 3/4" (19 MM) FOR POINTING. SPONGE FACE OF EACH STONE TO REMOVE EXCESS MORTAR.
    - 8. TUCK POINT JOINTS TO A SLIGHT CONCAVE PROFILE.
  - C. SEALANT JOINTS:
    - 1. COMPLY WITH REQUIREMENTS OF SECTION 07900.
    - 2. PRIME ENDS OF CAST STONE COMPONENTS, INSERT PROPERLY SIZED FOAM BACKING ROD, AND INSTALL SEALANT USING SEALANT GUN.
    - 3. PROVIDE SEALANT JOINTS AT FOLLOWING LOCATIONS AND AS INDICATED ON THE DRAWINGS.
  - A. CAST STONE COMPONENTS WITH EXPOSED TOPS.
  - B. JOINTS AT RELIEVING ANGLES.
  - C. CONTROL AND EXPANSION JOINTS.
- 3.3 TOLERANCES
  - A. INSTALLATION TOLERANCES: COMPLY WITH REQUIREMENTS OF CAST STONE INSTITUTE TECHNICAL MANUAL.
    - 1. VARIATION FROM PLUMB: DO NOT EXCEED 1/8" IN 5' (3 MM IN 1.5 M) OR 1/4" IN 20' (6 MM IN 6 M) OR MORE.
    - 2. VARIATION FROM LEVEL: DO NOT EXCEED 1/8" IN 5' (3 MM IN 1.5 M), 1/4" IN 20' (6 MM IN 6 M), OR 3/8" (9 MM) MAXIMUM.
    - 3. VARIATION IN JOINT WIDTH: DO NOT VARY JOINT THICKNESS MORE THAN 1/8" (3 MM) OR 1/4 OF NOMINAL JOINT WIDTH, WHICHEVER IS GREATER.
    - 4. VARIATION IN PLANE BETWEEN ADJACENT SURFACES: DO NOT EXCEED 1/8" (3-MM) DIFFERENCE BETWEEN PLANES OF ADJACENT COMPONENTS OR ADJACENT SURFACES INDICATED TO BE FLUSH WITH COMPONENTS.
- 3.4 REPAIR
  - A. SURFACE REPAIR:
    - 1. REPAIR CHIPPING AND OTHER SURFACE DAMAGE NOTICEABLE WHEN VIEWED IN DIRECT DAYLIGHT AT 20' (6 M).
    - 2. REPAIR WITH MATCHING TOUCHUP MATERIAL PROVIDED BY MANUFACTURER AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
    - 3. REPAIR METHODS AND RESULTS TO BE APPROVED BY ARCHITECT.
- 3.5 PROTECTION: PROTECT CAST STONE COMPONENTS FROM SPLASHING AND OTHER DAMAGE.
- 3.6 CLEANING
  - A. IN-PROGRESS CLEANING:
    - 1. CLEAN CAST STONE COMPONENTS AS WORK PROGRESSES.
    - 2. REMOVE MORTAR FINS AND SMEARS BEFORE TOOLING JOINTS.
  - B. FINAL CLEANING:
    - 1. CLEAN EXPOSED CAST STONE, AFTER MORTAR IS THOROUGHLY SET AND CURED.
    - 2. CLEANER:
      - A. WET SURFACES WITH WATER BEFORE APPLYING CLEANER.
      - B. APPLY CLEANER TO CAST STONE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REMOVE CLEANER PROMPTLY BY RINSING THOROUGHLY WITH CLEAR WATER.
- 3.7 INSPECTION AND ACCEPTANCE
  - A. INSPECT IN ACCORDANCE WITH CAST STONE INSTITUTE TECHNICAL MANUAL.
- 3.8 WATER REPELLENT
  - A. APPLY SILANE OR SILOXANE WATER REPELLENT FOR WEATHERPROOFING CAST STONE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
  - B. APPLY WATER REPELLENT AFTER POINTING, PATCHING, CLEANING, AND INSPECTION ARE COMPLETED.

- 3.8 HIGH PERFORMANCE COATINGS APPLIED TO SURFACES NOT SCHEDULED TO RECEIVE COATINGS.
- PART 1 - GENERAL
- 1.1 SUMMARY
  - A. SECTION INCLUDES:
    - 1. SURFACE PREPARATION.
    - 2. HIGH PERFORMANCE (ANTI-GRAFFITI) COATINGS ON EXTERIOR BRICK, CAST STONE, AND CONCRETE WALL SURFACES.
  - B. RELATED SECTIONS:
    - 1. DIVISION 1: ADMINISTRATIVE, PROCEDURAL, AND TEMPORARY WORK REQUIREMENTS.
    - 2. SECTION 4720 ARCHITECTURAL CAST STONE.
- 1.2 SUBMITTALS
  - A. SUBMITTALS FOR REVIEW:
    - 1. PRODUCT DATA: INCLUDE DESCRIPTIVE DATA AND RECOMMENDATIONS FOR MIXING, APPLICATION, AND CURING.
  - B. QUALITY CONTROL SUBMITTALS:
    - 1. CERTIFICATES: MANUFACTURER'S CERTIFICATION THAT THEY MANUFACTURE ALL SPECIFIED MATERIALS.
    - 2. TEST REPORTS: INDICATING COMPLIANCE OF EACH COATING TO SPECIFIED PERFORMANCE CRITERIA.
  - C. SUSTAINABLE DESIGN CERTIFICATIONS:
    - 1. LOW-EMITTING PRODUCTS: INDICATE MAXIMUM VOLATILE ORGANIC COMPOUND CONTENT FOR EACH COATING.
- 1.3 QUALITY ASSURANCE
  - A. MOCKUP:
    - 1. PROVIDE MOCKUPS OF COATING SYSTEM ON EACH TYPE OF SUBSTRATE.
    - 2. SIZE: 1X1 FEET MIN.
    - 3. LOCATE WHERE DIRECTED.
    - 4. WHEN APPROVED, MOCKUPS BECOME STANDARD OF QUALITY BY WHICH THE WORK WILL BE JUDGED.
  - B. PROVIDE MATERIALS PRODUCED BY A SINGLE MANUFACTURER. DELIVERY, STORAGE AND HANDLING: STORE MATERIALS IN SEALED CONTAINERS IN A COOL, DRY, PROTECTED WELL-VENTILATED AREA IN COMPLIANCE WITH ALL CURRENT AND LOCAL REGULATIONS. KEEP OUT OF DIRECT SUNLIGHT, MOISTURE OR RAIN. MAINTAIN MATERIAL IN SEALED CONTAINERS AT ALL TIMES.
- 1.4 PROJECT CONDITIONS
  - A. ENVIRONMENTAL REQUIREMENTS:
    - 1. DO NOT APPLY COATINGS WHEN AIR OR SURFACE TEMPERATURES ARE BELOW 50 DEGREES F.
    - 2. PREVENT WIDE VARIATIONS IN TEMPERATURE THAT COULD RESULT IN CONDENSATION ON FRESHLY COATED SURFACES.
  - B. PROTECT ADJACENT AND UNDERLYING SURFACES NOT TO BE COATED.
  - C. BROOM CLEAN AREAS TO RECEIVE COATINGS; REMOVE EXCESSIVE DUST.
  - D. PROVIDE ADEQUATE ILLUMINATION IN AREAS TO RECEIVE COATINGS.
- 1.6 MAINTENANCE:
  - A. EXTRA MATERIALS: NONE
  - B. GRAFFITI REMOVAL PRODUCTS - TO BE PROVIDED TO OWNER UPON FINAL ACCEPTANCE; MIN. 5 GAL. OF EITHER OF THE FOLLOWING PRODUCTS:
    - 1. GR-050 BY GEO ENVIRO GROUP.
    - 2. EGR BY GEO ENVIRO GROUP.
- PART 2 - PRODUCTS
- 2.1 MANUFACTURERS
  - A. CONTRACT DOCUMENTS ARE BASED ON PRODUCTS BY GEO ENVIRO GROUP; 21ST CENTURY COATINGS (CANADA) LTD. (604-204-0075)
- 2.2 SUBSTITUTIONS: UNDER PROVISIONS OF DIVISION 1.
- 2.3 MATERIALS
  - A. ANTI-GRAFFITI COATINGS:
    - 1. GEO ENVIRO-WAX ULTRA
  - B. COLORS: N/A.
- 2.4 ACCESSORIES
  - A. THINNERS AND CLEANERS: AS RECOMMENDED BY COATING MANUFACTURER.
  - MIXES
    - A. MIX MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- PART 3 - EXECUTION
- 3.1 PREPARATION
  - A. REMOVE OR PROTECT HARDWARE, ACCESSORIES, PLATES, LIGHTING FIXTURES, AND SIMILAR ITEMS IN CONTACT WITH COATING SURFACES BUT NOT SCHEDULED TO RECEIVE COATINGS.
  - B. THOROUGHLY CLEAN SURFACES.
  - C. SCHEDULE CLEANING SO THAT DUST AND CONTAMINANTS FROM CLEANING DO NOT FALL ON WET, NEWLY COATED SURFACES.
  - D. NEUTRALIZE AND REMOVE MILDEW.
  - E. CONDITION OF SURFACES:
    - 1. CLEAN, DRY, AND PROTECTED FROM DAMPNESS.
    - 2. SMOOTH, EVEN, AND FREE FROM FOREIGN MATTER THAT COULD AFFECT ADHESION OR APPEARANCE OF COATINGS.
- 3.2 APPLICATION
  - A. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR APPLICATION AND COVERAGE.
  - B. KEEP APPLICATION EQUIPMENT CLEAN AND IN WORKING CONDITION.
  - C. APPLY MATERIALS UNDER ADEQUATE ILLUMINATION.
  - D. SPREAD COATINGS EVENLY AND SMOOTHLY, FREE FROM RUNS, SAGS, HOLIDAYS, LAP MARKS, AIR BUBBLES AND PIN HOLES.
  - E. APPLY COATINGS TO MINIMUM COVERAGE RATES REQUIRED BY MANUFACTURER, IN NUMBER OF COATS REQUIRED BY MANUFACTURER TO ACHIEVE ADEQUATE PROTECTION.
  - F. ALLOW EACH COAT TO CURE COMPLETELY BEFORE APPLYING ADDITIONAL COATS.
  - G. ENSURE THAT EACH COAT IS UNDAMAGED PRIOR TO APPLYING SUCCEEDING COAT.
  - H. REMOVE DEFECTIVE COATINGS AND APPLY ADDITIONAL COATS AS NECESSARY TO PRODUCE ACCEPTABLE FINISH.

3.4 SCHEDULED TO RECEIVE COATINGS. ADJUSTING: REPAIR DAMAGED AND DEFECTIVE COATINGS PRIOR TO FINAL ACCEPTANCE.

CALCULATED JMM	CHECKED HLM	<b>GENERAL NOTES</b>
<b>FIFTH AVE. BETWEEN OLENTANGY RIVER RD. AND PERRY ST.</b>		
<b>SSI OVERALL TRAFFIC MANAGEMENT PLAN</b>		<b>CITY OF COLUMBUS</b>
5 22		



**MAINTENANCE OF TRAFFIC**

PLAN AND SPECIFICATION COMPLIANCE

THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC CONTROL DEVICES IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS, THE 2002 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS AND ITS SUPPLEMENTAL SPECIFICATIONS, 2002 CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND THE "TC" STANDARD CONSTRUCTION DRAWINGS ISSUED BY THE ODOT BUREAU OF DESIGN SERVICES (SUPPLEMENTS THE PLAN SPECIFICATIONS). THE CITY OF COLUMBUS, TRANSPORTATION DIVISION SHALL DETERMINE WHETHER THE SUPPLIED ITEMS MEET OR EXCEED THESE SPECIFICATIONS.

**ITEM 614 MAINTENANCE OF TRAFFIC, AS PER PLAN**

FOR TYPICAL TRAFFIC CONTROL PLACEMENT AND DRUM LOCATION DURING WORK AND NON-WORKING HOURS SEE PLAN AND DETAIL ON SHEETS 7/23 AND 8/23.

**A. TEMPORARY TRAFFIC CONTROL ITEMS**

ALL TEMPORARY TRAFFIC CONTROL (TTC) DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE "OHIO MANUAL OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION AND MAINTENANCE OPERATIONS" (CURRENT EDITION). COPIES ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF CONTRACTS, 1ST FLOOR, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43223. NOTE: ALL DEVICES SHALL COMPLY, FOR CONDITION AND LOCATION, WITH THE CURRENT EDITION OF THE NCHRP 350 CRASH TESTING GUIDELINES.

CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TRAFFIC CONTROL IS IN PLACE AND APPROVED BY THE TRANSPORTATION DIVISION INSPECTOR. IF THE CONTRACTOR DOES NOT COMPLY WITH THE STANDARDS, INCLUDING THE INSTALLATION OF TEMPORARY PAVEMENT MARKINGS AND THE REMOVAL OF CONFLICTING TRAFFIC CONTROLS, THEIR PERMIT SHALL BE REVOKED AND ALL WORK SHALL BE TERMINATED.

THE CONTRACTOR SHALL GIVE ADVANCE NOTIFICATION (WRITTEN AND VERBALLY) TO THE TEMPORARY TRAFFIC CONTROL COORDINATOR AT 645-6269 OR 645-5845, THE COLUMBUS PAVING THE WAY PROGRAM COORDINATOR AT 645-7283 OR 645-6016, AND THE PROJECT MANAGER, INFORMING THEM OF ALL UPCOMING TRAFFIC PATTERN CHANGES. NOTIFICATION SHALL INCLUDE, BUT NOT LIMITED TO, WHAT, WHERE, WHEN, AND HOW PEDESTRIAN AND VEHICULAR TRAFFIC WILL BE AFFECTED, AND THE TEMPORARY TRAFFIC CONTROL PROCEDURES THE CONTRACTOR IS PLANNING TO USE. THE TYPE OF TRAFFIC CHANGE SHALL DETERMINE THE LENGTH OF ADVANCE NOTIFICATION REQUIRED:

TYPE OF CHANGE	ADVANCE NOTIFICATION NEEDED
DETOURS/ROAD CLOSURES	30-DAY NOTIFICATION PRIOR TO CLOSURE
LANE CLOSURES LASTING 2 WEEKS OR MORE	2-WEEKS
LANE CLOSURES OF LESS THAN 2 WEEKS	3-DAYS
LANE CLOSURES OF 2 DAYS OR LESS	1-DAY
ANY OTHER UNFORESEEN IMPACTS TO TRAFFIC SHALL BE IMMEDIATELY REPORTED AS THEY OCCUR.	

A TTC PLAN (TTCP) INCLUDING PEDESTRIAN CONTROL SHALL BE SUBMITTED TO THE TTC COORDINATOR AT 645-6269 OR 645-5845 AT THE PRE-CONSTRUCTION MEETING OR A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO BEGINNING WORK. COPIES OF THE APPROVED TTCP SHALL BE GIVEN TO THE PROJECT ENGINEER AND KEPT ON SITE ALONG WITH THE STREET CLOSURE/OCCUPANCY PERMIT.

STEADY-BURNING, TYPE C LIGHTS SHALL BE REQUIRED ON ALL BARRICADES, DRUMS, AND SIMILAR TRAFFIC CONTROL DEVICES IN USE AT NIGHT. ONLY 42" REFLECTORIZED CHANNELIZING DEVICES (CONES) OR DRUMS SHALL BE PERMITTED FOR NIGHTTIME WORK WITH THE APPROVAL OF THE TTC COORDINATOR AT 645-6269 OR 645-5845 PER O.D.O.T. STANDARDS.

ALL TRENCHES WITHIN THE ROAD RIGHT-OF-WAY SHALL BE BACKFILLED OR SECURELY PLATED (PER CITY OF COLUMBUS GENERAL POLICY ON STEEL PLATE USAGE DATED 11/15/2006 AND 2007 STD. DWG. 1441) DURING NONWORKING HOURS.

ACCESS FOR PEDESTRIAN AND VEHICULAR TRAFFIC TO ALL ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

ALL TRAFFIC LANES SHALL BE FULLY OPEN TO TRAFFIC FROM 6:00 TO 9:30 A.M. AND 3:30 TO 6:00 P.M., MONDAY THROUGH FRIDAY ON FIFTH AVE. ONE LANE MAY BE CLOSED TO TRAFFIC DURING WORK HOURS.

TWO-WAY, ONE-LANE TRAFFIC MAY BE MAINTAINED DURING CONSTRUCTION OPERATIONS ON FIFTH AVE. PER FIGURE TA-10 TYPICAL APPLICATION 10 OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. A UNIFORMED LAW ENFORCEMENT OFFICER (LEO) SHALL BE SUBSTITUTED FOR EACH FLAGGER POSITION SHOWN AND SHALL BE PRESENT WHENEVER, TWO-WAY, ONE LANE OPERATION IS IN EFFECT.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING OSU HOME FOOTBALL GAMES 12:00 NOON FRIDAY THROUGH 6:00 A.M. MONDAY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND SAFE MOVEMENT OF PEDESTRIANS AND BICYCLISTS THROUGH, AROUND OR DETOURED AWAY FROM THE CONSTRUCTION SITE. TRAFFIC CONTROL FOR PEDESTRIAN MOVEMENT SHALL BE AS PER FIGURES TA-28 & 29 OF PART VI OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

TEMPORARY "EMERGENCY NO PARKING" SIGNS SHALL BE INSTALLED AND REMOVED BY THE CONTRACTOR IN AREAS WITH NO PARKING METERS. THE SIGNS SHALL HAVE THE INSTALLATION DATE, WORKING DATES, AND HOURS OF RESTRICTION SHOWN ON EACH SIGN. THESE SIGNS MAY BE OBTAINED FROM THE TRANSPORTATION DIVISIONS' PERMIT OFFICE. THE POLICE DIVISION REQUIRES THE "EMERGENCY NO PARKING" SIGNS BE POSTED A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY VEHICLES BEING TOWED. WITHIN TWENTY-FOUR (24) HOURS OF POSTING, THE CONTRACTOR SHALL SUPPLY THE INSPECTION SECTION WITH A WRITTEN RECORD OF POSTED LOCATIONS (FAX: 645-3298).

THE TRANSPORTATION DIVISION SHALL LOCATE AND MARK ALL UNDERGROUND TRAFFIC CONTROL CABLES. THE TRAFFIC ENGINEERING SHOP SHALL BE NOTIFIED 645-7393 (FAX 645-5967) AT LEAST FORTY-EIGHT (48) HOURS (EXCLUDING SAT. & SUN.) PRIOR TO THE BEGINNING OF ANY WORK WITHIN 450 FEET OF ANY SIGNALIZED INTERSECTION(S) OR WITHIN ANY POSTED AREA WHERE THE DIVISION HAS UNDERGROUND CABLES. SIGNALS MANAGEMENT PERSONNEL 645-6418 SHALL BE NOTIFIED SIX (6) WEEKS IN ADVANCE FOR SIGNAL REVISIONS OR POLE RELOCATIONS.

NO EXCAVATION SHALL BE MADE WITHIN FIVE (5) FEET OF ANY POLE THAT SUPPORTS TRAFFIC SIGNAL DISPLAYS OR SIGNS BY MAST ARM OR SIGNAL SPAN. EXCAVATION WITHIN EIGHT (8) FEET, BUT MORE THAN FIVE (5) FEET SHALL REQUIRE ADDITIONAL SUPPORT (DOWN GUY, HEAD GUY, BASE GUY, ETC.). THE CONTRACTOR SHALL CONTACT TRANSPORTATION DIVISION SIGNALS MANAGEMENT PERSONNEL AT 645-0423 (CELL 419-4501) AT LEAST FORTY-EIGHT (48) HOURS (EXCLUDING SAT. & SUN.) PRIOR TO THE BEGINNING OF SUCH EXCAVATION SO THAT THE CITY CAN APPROVE THE STABILIZATION SETUP BY THE CONTRACTOR. STABILIZATION WILL BE DONE BY THE CONTRACTOR AT THE OWNERS'/CONTRACTING AGENCY'S EXPENSE.

WHEN ANY TRAFFIC CONTROL DEVICE, CONDUIT, OR CABLE GETS DAMAGED, THE CONTRACTOR SHALL NOTIFY SIGNALS MANAGEMENT PERSONNEL AT 645-7963 BETWEEN 8:00 AM AND 4:30 PM, MONDAY THROUGH FRIDAY. AT OTHER TIMES OR IF SIGNALS MANAGEMENT PERSONNEL CANNOT BE REACHED, CONTACT THE TRAFFIC ENGINEERING MAINTENANCE SHOP AT 645-7393. LEAVE A MESSAGE ON THE ANSWERING MACHINE IF NECESSARY.

THE ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL THE CRITICAL PERMANENT TRAFFIC CONTROLS ARE IN PLACE, OR UNTIL TEMPORARY TRAFFIC CONTROLS APPROVED BY THE ENGINEER, ARE INSTALLED. THE CRITICAL PERMANENT TRAFFIC CONTROLS ARE STOP, YIELD, ONE WAY, DO NOT ENTER AND RESTRICTED TURN SIGNS. OTHER CRITICAL SIGNS MAY BE NOTED ON THE PLANS AS WELL. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE PREMATURE REMOVAL OF TEMPORARY TRAFFIC CONTROLS.

THE ROADWAY OR ANY SECTION OF ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL ALL TEMPORARY, NON-REFLECTIVE, BLACKOUT TAPE HAS BEEN COMPLETELY REMOVED FROM NON-CONFLICTING PERMANENT PAVEMENT MARKINGS FOR THAT AREA OF THE ROADWAY, OR UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. THIS IS SUPPLEMENTAL TO CMS-614.11-F, AND SHALL BE PAID FOR THROUGH THE 614-LUMP SUM.

THE CONTRACTOR SHALL MAINTAIN ALL PERMANENT TRAFFIC CONTROLS NOT IN CONFLICT WITH THE TEMPORARY TRAFFIC CONTROLS THROUGHOUT THIS PROJECT. PERMANENT TRAFFIC CONTROLS MAY BE TEMPORARILY RELOCATED OR COVERED, AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED, OR IMPROPERLY PLACED SIGNS.

ANY WORK DONE BY THE TRANSPORTATION DIVISION, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF TEMPORARY TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF THE NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTOR'S EXPENSE.

WHENEVER YELLOW CENTERLINES OR TURN-LANE LINES ARE PAVED OVER, REMOVED, OR OTHERWISE UNSERVICEABLE, THE CONTRACTOR SHALL INSTALL CLASS II TEMPORARY STRIPING (MINIMUM 4' LONG SEGMENTS). TEMPORARY PAINT SHALL BE USED ON ALL MILLED SURFACES. TEMPORARY TAPE SHALL BE USED ON ALL FINAL COURSES OF ASPHALT. PAINT OR TAPE MAY BE USED ON INTERMEDIATE COURSES OF ASPHALT. IF APPROVED BY THE ENGINEER, DRUMS WITH STEADY BURNING TYPE C LIGHTS AND "KEEP RIGHT" SIGNS MAY BE SUBSTITUTED FOR CENTERLINE MARKINGS.

CLASS II TEMPORARY STRIPING (MINIMUM 4' LONG SEGMENTS) SHALL BE AS PER ITEM 614 - WORK ZONE PAVEMENT MARKING AND SHALL BE PLACED WITHIN ONE (1) FOOT LONGITUDINAL TOLERANCE OF THE PERMANENT STRIPE(S). ALL TEMPORARY STRIPING NOT TO WITHIN ONE (1) FOOT TOLERANCE SHALL BE REMOVED AND REPLACED IN THE PROPER LOCATION BY THE CONTRACTOR. CLASS II TEMPORARY STRIPING SHALL BE OF THE APPROPRIATE COLOR AND SPACED A MAXIMUM OF FORTY (40) FEET CENTER TO CENTER.

**B. EXISTING PERMANENT TRAFFIC CONTROL ITEMS**

THE ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL THE CRITICAL PERMANENT TRAFFIC CONTROLS ARE IN PLACE. THE CRITICAL PERMANENT TRAFFIC CONTROLS ARE STOP, YIELD, ONE WAY, DO NOT ENTER AND RESTRICTED TURN SIGNS. OTHER CRITICAL SIGNS MAY BE NOTED ON THE PLANS AS WELL. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE PREMATURE REMOVAL OF TEMPORARY TRAFFIC CONTROLS.

ALL PERMANENT PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS AS SHOWN ON THIS PLAN SHALL BE INSTALLED BY THE CONTRACTOR AT THE PROJECTS EXPENSE. THE TRANSPORTATION DIVISION, PAVEMENT MARKING SECTION SHALL BE NOTIFIED AT 645-8376 A MINIMUM OF FORTY-EIGHT (48) HOURS (EXCLUDING SAT. & SUN.) PRIOR TO THE INSTALLATION OF PERMANENT MARKINGS TO INSPECT AND APPROVE THE PAVEMENT MARKING LAYOUT PRIOR TO PLACING THE PERMANENT MARKINGS.

ANY WORK DONE BY THE TRANSPORTATION DIVISION, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF PERMANENT TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF THE NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTOR'S EXPENSE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTALLATION AND/OR REPLACEMENT OF ALL PERMANENT TRAFFIC CONTROL DEVICES DAMAGED OR REMOVED DURING CONSTRUCTION. PERMANENT TRAFFIC CONTROL NO LONGER IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE REPLACED IMMEDIATELY.

PERMANENT STRIPING OR CLASS 1 TEMPORARY STRIPING SHALL BE INSTALLED NO LATER THAN FOURTEEN (14) DAYS AFTER THE FINAL PAVING COURSE IS COMPLETED. THE PAVING CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE STRIPING CONTRACTOR TO INSURE THE PERMANENT STRIPING IS INSTALLED WITHIN THE FOURTEEN (14) CALENDAR DAY LIMIT.

STAGE CONSTRUCTION

THE CONTRACTOR SHALL MAINTAIN ONE-LANE TWO-WAY TRAFFIC CONTROL ON FIFTH AVE. FROM STA. 14+50 TO STA. 19+50 AND FROM STA. 26+25 TO STA. 29+25. TWO LAW ENFORCEMENT OFFICERS SHALL MAINTAIN ALTERNATE ONE WAY TRAFFIC MOVEMENT AT EITHER END OF WORK ZONES DURING THE HOURS OF 9:30 AM AND 3:30 PM MONDAY THROUGH FRIDAY. DURING OTHER HOURS, BARRELS SHALL BE PLACED ON TOP OF WORK AREA OVER 304 AGGREGATE AND TEMPORARY ASPHALT. TWO-WAY TRAFFIC WILL RESUME DURING NON WORKING HOURS.

CONSTRUCT THE PROPOSED TRAFFIC ISLANDS. FAILURE TO COMPLETE THE WORK WITHIN THE SPECIFIED TIME PERIOD WILL RESULT IN AN ASSESSMENT AGAINST THE CONTRACTOR FOR LIQUIDATED DAMAGES AS SET FORTH IN CONTRACT DOCUMENTS.

AFTER COMPLETION OF THE WORK, TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED IN ACCORDANCE WITH 641.10.

LAW ENFORCEMENT OFFICERS -- ITEM 614 SUPPLEMENT

LAW ENFORCEMENT OFFICERS (LEO'S) ARE REQUIRED FOR DIRECTING TRAFFIC (SETUPS, TEAR DOWNS, ALL TWO WAY/ONE LANE MOVEMENTS, SUBSTANTIAL SHIFTS AND CLOSURE OPERATIONS), AND OTHERWISE AS DESIGNATED BY THE ENGINEER. LEO'S ARE ALSO AVAILABLE FOR GENERAL FLAGGING OPERATIONS IF THE CONTRACTOR SO CHOOSES. LEO'S MAY BE REQUESTED THROUGH A SPECIAL DUTY OFFICER COORDINATOR OR BY CALLING THE CITY OF COLUMBUS POLICE DEPARTMENT, SPECIAL DUTY OFFICE-(614) 645-4795 MONDAY THRU FRIDAY FROM 8:00AM TO 4:00PM. A TWO WORKING DAY NOTICE IS NEEDED FOR EACH REQUEST THROUGH THE SPECIAL DUTY OFFICE, UNLESS A SUBSTANTIAL EMERGENCY EXISTS. THIS COST SHALL BE PAID UNDER THE LEO PAY ITEM AT AN HOURLY RATE. THE COST OF NON-LEO FLAGGERS SHALL BE INCLUDED IN THE 614 LUMP SUM ITEM.

**PEDESTRIAN PATHWAY AND BIKEWAY PROVISIONS AND MAINTENANCE TO BE INCLUDED WITH ITEM 614**

NOTE: ALONG WITH SPECIFIC CITY OF COLUMBUS REQUIREMENTS THE PROVISIONS AND MAINTENANCE OF PEDESTRIAN PATHWAYS FOR THIS PROJECT SHALL BE COMPLIANT WITH, BUT NOT LIMITED TO, CHAPTER 6D-PEDESTRIAN AND WORKER SAFETY" FROM THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (LATEST EDITION). NOTE: "TEMPORARY MID-BLOCK CROSSWALKS" ARE NOT APPROVED FOR CITY OF COLUMBUS APPLICATIONS. SPECIAL ATTENTION SHALL BE GIVEN TO THE FOLLOWING:

1) ADVANCED WRITTEN NOTIFICATION OF BIKEWAY AND SIDEWALK CLOSURES, DETOURS, SIGNAGE, AND OTHER PEDESTRIAN AND BICYCLE GUIDANCE SHALL BE PROVIDED TO THE SURROUNDING COMMUNITY AND THE APPROPRIATE CITY OF COLUMBUS PERSONNEL (THIS SHALL BE ACCOMPLISHED AS PER THE "PRE-CONSTRUCTION" AND "ADVANCED" NOTIFICATION REQUIREMENTS AS PRESCRIBED IN THE PLAN NOTES SECTION AND MAINTENANCE OF TRAFFIC NOTES SECTION RESPECTIVELY IN THIS SET OF PLANS). SIDEWALK CLOSURE AND/OR DETOUR SIGNS SHALL BE MOUNTED ON BARRICADES THAT COMPLETELY BLOCK THE AREA THAT IS CLOSED.

2) PEDESTRIAN AND BICYCLE ACCESS TO RESIDENCES AND BUSINESSES SHALL BE MAINTAINED AT ALL TIMES. MAINTAIN ACCESS TO BLOCKS FROM ONE END OR THE OTHER. FINISH WORK AT ONE END OF A BLOCK BEFORE DISTURBING THE OTHER END, OR INSTALL TEMPORARY SIDEWALK.

3) THERE SHALL NOT BE ANY ABRUPT CHANGES IN GRADE OR TERRAIN THAT COULD CAUSE A TRIPPING HAZARD OR COULD BE A BARRIER TO WHEELCHAIR USE. TEMPORARY WALKWAYS SHALL HAVE A SMOOTH HARD SURFACE, BE A MINIMUM OF 60" WIDE, AND WILL BE FREE OF ANY PROTRUSIONS.

4) IF A SIGNIFICANT POTENTIAL EXISTS FOR VEHICLE INCURSIONS INTO THE PEDESTRIAN PATH, PEDESTRIANS SHALL BE REROUTED OR TEMPORARY TRAFFIC DIVIDERS SHALL BE INSTALLED. IF A TEMPORARY TRAFFIC DIVIDER IS USED TO SHIELD PEDESTRIANS, IT SHALL BE DESIGNED TO ACCOMMODATE SITE CONDITIONS, PROVIDE AN ACCESSIBLE PASSAGE, AND BE DETECTABLE BY PEOPLE WITH DISABILITIES.

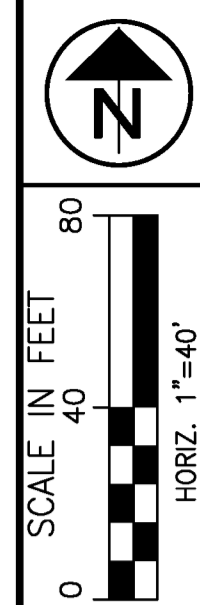
5) DURING CONSTRUCTION OF BIKE PATH RELOCATION, CONTRACTOR MUST POST "TRAIL CLOSED AHEAD" TEMPORARY SIGNAGE, MIN. OF 200' NORTH AND SOUTH OF WORK SITE. SIGNS MUST REMAIN IN PLACE UNTIL PAVING IS COMPLETE. CONTRACTOR MUST MAKE EVERY EFFORT TO KEEP TRAIL CLOSURE PERIODS TO BETWEEN MONDAY TO FRIDAY 9:00 A.M. TO 3:00 P.M.

Drawing: K:\2101015\Draw\15th East of Olentangy\15th\15thTrafficManagement.dwg View: 12 Saved on: 07-07-08 08:35 Plotted by: cdm -L:\cadd 1:00 Plot scale: 1=1/8"=1'

CALCULATED JMM  
 CHECKED HLM  
 MAINTENANCE OF TRAFFIC NOTES  
 FIFTH AVE. BETWEEN OLENTANGY RIVER RD. AND PERRY ST.  
 SSI OVERALL TRAFFIC MANAGEMENT PLAN  
 CITY OF COLUMBUS  
 6  
 22



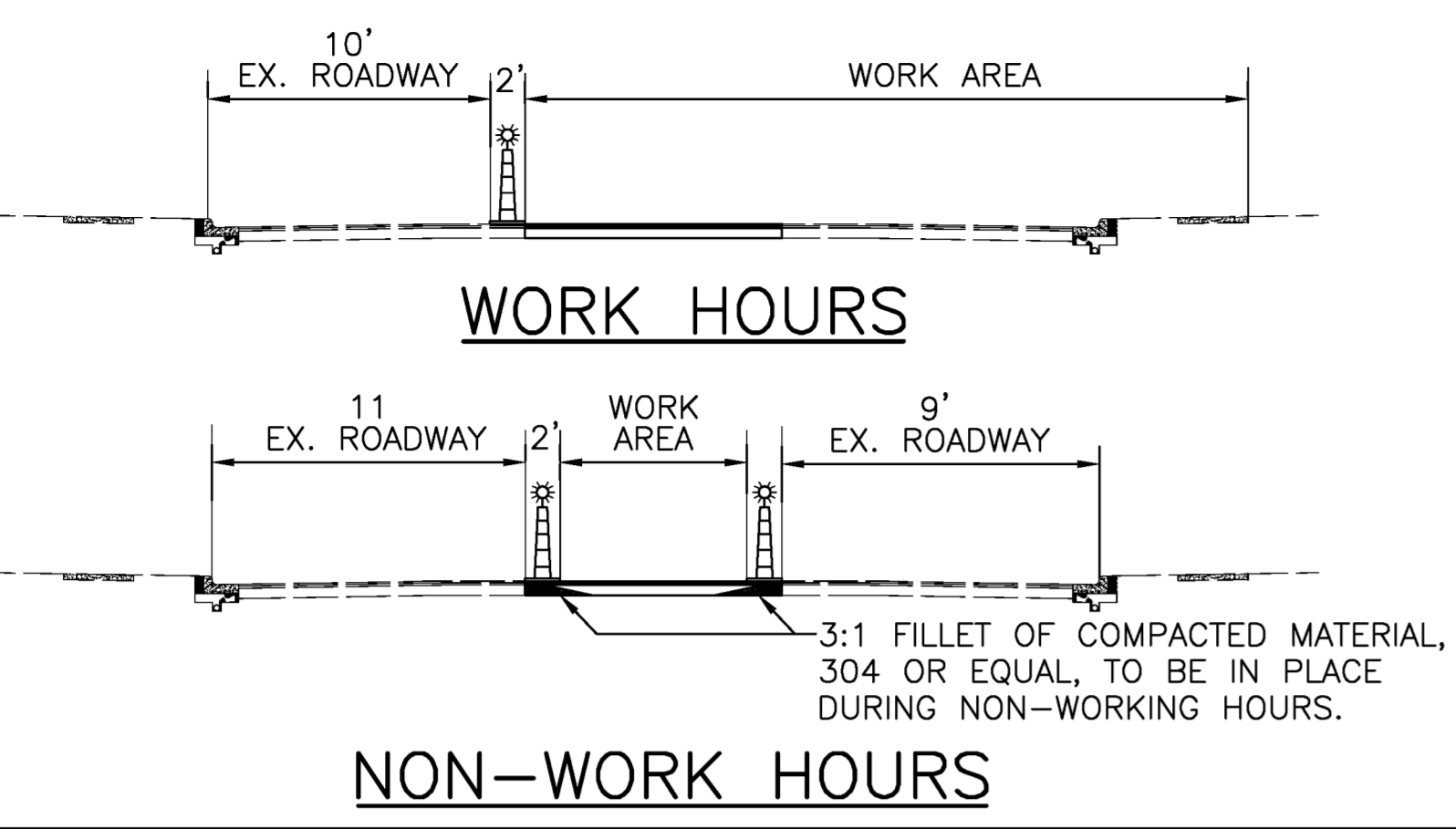




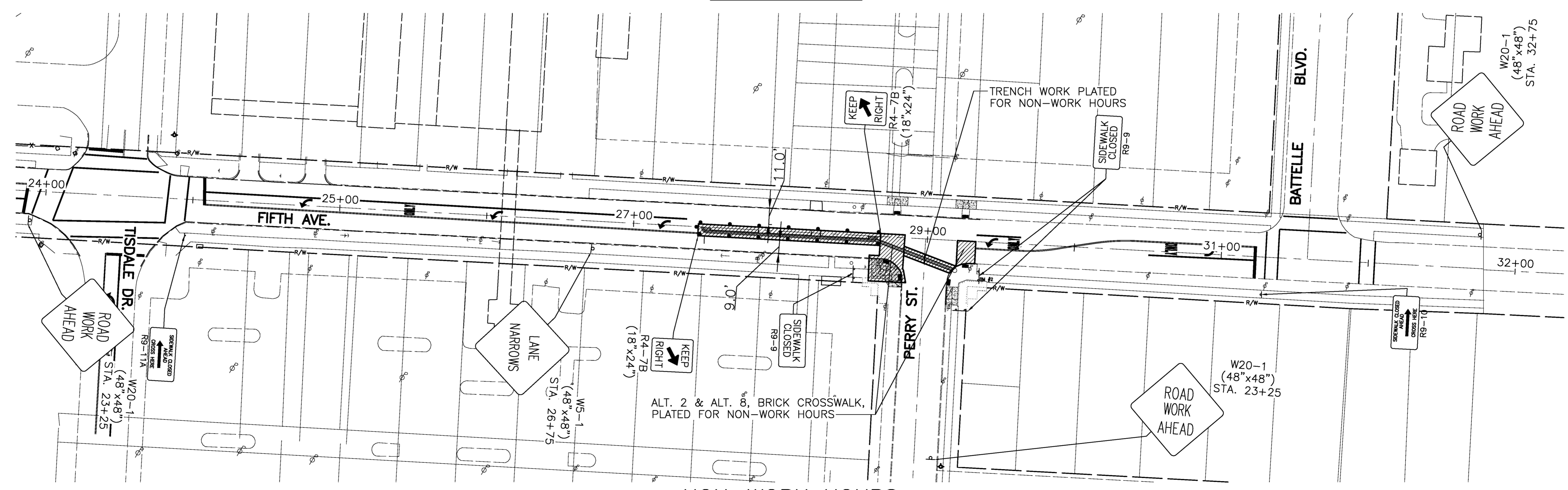
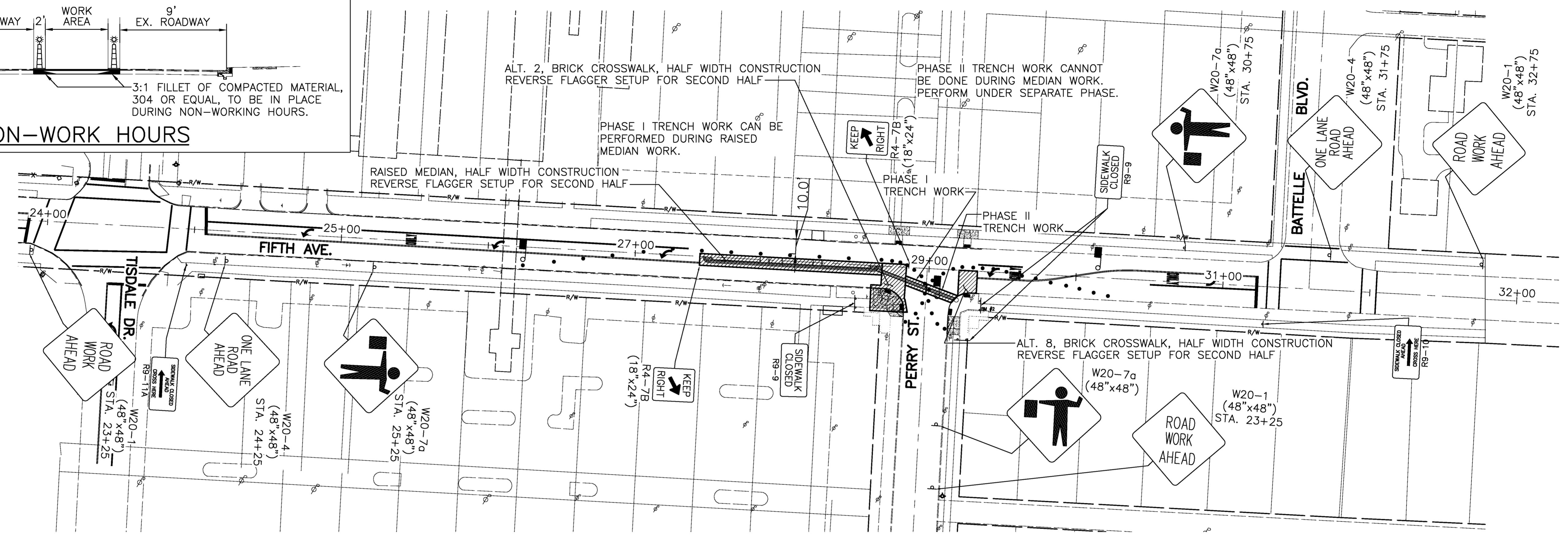
CALCULATED  
WRH  
CHECKED  
S/W

**MAINTENANCE OF TRAFFIC PHASE 2**  
FIFTH AVE. BETWEEN OLENTANGY RIVER RD. AND PERRY ST.

**SSI OVERALL TRAFFIC MANAGEMENT PLAN**  
CITY OF COLUMBUS



- LEGEND**
- TEMPORARY SIGN 1 POST
  - TEMPORARY SIGN 2 POST
  - EXISTING SIGN
  - DRUM
  - FIRE HYDRANT
  - LIGHT POLE
  - POWER POLE
  - EXISTING SIGN
  - TEMPORARY SIGN



Drawing: K:\210105\Draw\17th East of Olentangy\1010171101\1010171101\_2.dwg Saved on: 05-19-18 14:09 Revised by: cdm -L:locat: 1:00 -Plot scale 1=1/8"=1/8"



**GENERAL SUMMARY - BASE BID ITEMS**

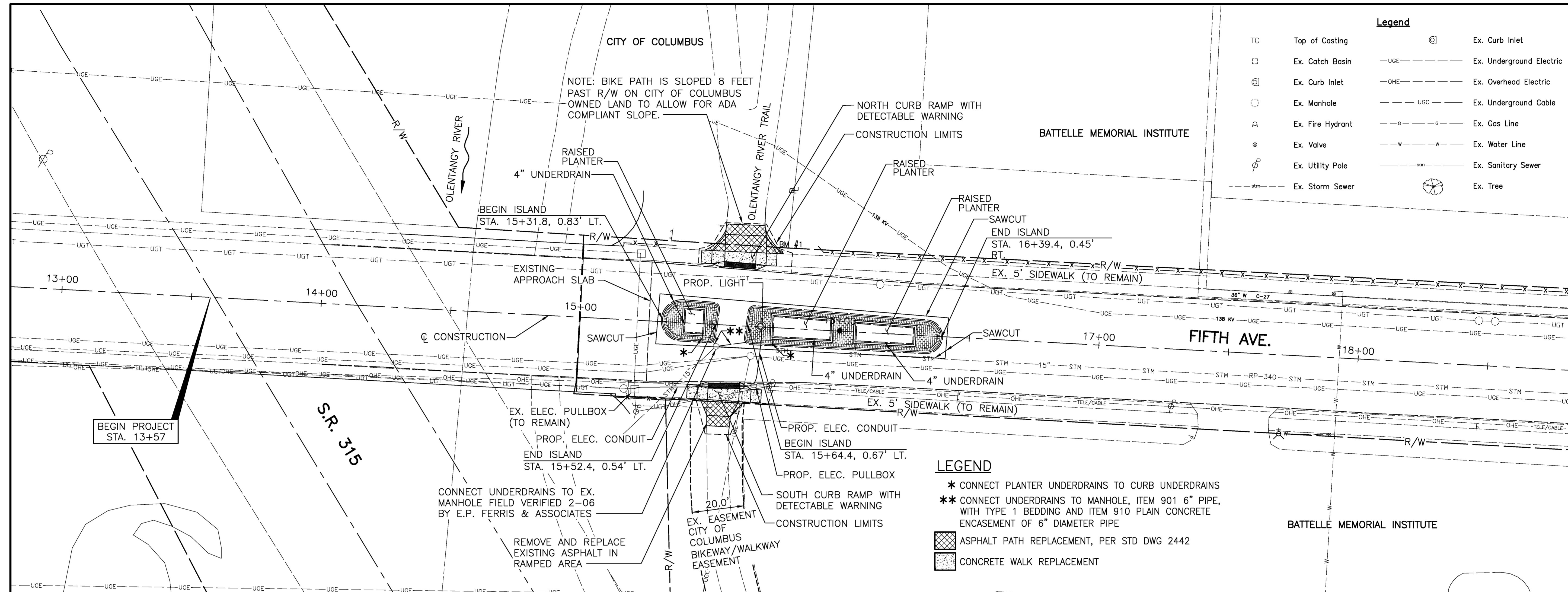
ITEM	SHEET NUMBER					ITEM	TOTAL	UNIT	DESCRIPTION	SEE SHEET
	10	11	17	19	22					
<b>ROADWAY</b>										
202	218	160				202	378	SY	PAVEMENT REMOVED AND DISPOSED OF	
202	290	312				202	602	SF	WALK TO BE REMOVED	
204	218	166				204	384	SY	SUBGRADE COMPACTION	
304	80	60				304	140	SY	3" AGGREGATE BASE	
305	80	60				305	140	SY	8" CONCRETE BASE	
402	6.5	5.0				402	11.5	TON	ASPHALT CONCRETE, PG64-22	
404	6.5	5.0				404	11.5	TON	ASPHALT CONCRETE	
407	3	2				407	5	GAL	TACK COAT BITUMINOUS MATERIAL	
413	259	272				413	531	LF	CRACK SEALING, HOT APPLIED	
608	2	2				608	4	EACH	CURB RAMP	
608	353	541				608	894	SF	CONCRETE WALK	
609	232	250				609	482	LF	18" STRAIGHT CONCRETE CURB, AS PER PLAN	12,13
616	0.5	0.5				616	1	MGAL	WATER	
616	0.5	0.5				616	1	TON	CALCIUM CHLORIDE	
659	76	76				659	152	SY	SEEDING AND MULCHING	
659	2						2	MGAL	WATER	
SPEC.	2					SPEC.	2	EACH	12"x2' DETECTABLE WARNINGS, AS PER PLAN	10
1551		6				1551	6	EACH	DETECTABLE WARNINGS	
<b>STRUCTURES</b>										
304	6	5				304	11	CY	3" AGGREGATE BASE	
605	391	450				605	841	LF	4" PIPE UNDERDRAIN	
901	15	15				901	30	LF	4" PIPE, WITH TYPE 1 BEDDING	
901	14	60				901	74	LF	6" PIPE, WITH TYPE 1 BEDDING	
910	14	60				910	74	LF	PLAIN CONCRETE ENCASEMENT OF 6" DIAMETER PIPE	
SPEC.	13	10				SPEC.	23	CY	NO. 8 AGGREGATE FILL, AS PER PLAN	12,13
SPEC.	593	522				SPEC.	1,115	SF	BRICK PAVERS COMPLETE IN PLACE, AS PER PLAN	12
SPEC.	172					SPEC.	418	LF	CONCRETE WALL (STEEL, EXCAVATION, BACKFILL), AS PER PLAN	12
SPEC.		216				SPEC.	216	LF	CAST STONE CURB, COMPLETE IN PLACE (SEE SHEET 3)	
SPEC.		42				SPEC.	42	LF	IRON WICKET FENCE, COMPLETE IN PLACE (SEE SHEET 3)	
<b>TRAFFIC CONTROL</b>										
621			25	12		621	37	EACH	RAISED PAVEMENT MARKERS FURNISHED AND INSTALLED, YELLOW	
621			8			621	8	EACH	RAISED PAVEMENT MARKERS FURNISHED AND INSTALLED, WHITE/RED	
630			49	34		630	83	SF	SIGNS, FLAT SHEET TYPE "H", AS PER PLAN	
630			78	47		630	125	LF	GROUND MOUNTED SUPPORTS NO. 3 POST, AS PER PLAN	17
630			2	2		630	4	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
630			1	2		630	3	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, AS PER PLAN	17
644			1,213	83		644	1,296	LF	REMOVAL PAVEMENT MARKING	
644			4	1		644	5	EACH	REMOVAL PAVEMENT MARKING	
644			3			644	3	EACH	LANE ARROW	
644			161	28		644	189	LF	20" TRANSVERSE LINE YELLOW	
644			0.108	0.024		644	0.132	MILE	CENTER LINE	
644			0.032	0.046		644	0.078	MILE	5" EDGE LINE YELLOW	
644			245			644	245	MILE	CHANNELIZING LINE	
644			84	128		644	212	LF	10" CROSSWALK LINE, WHITE,	
646			80	140		646	220	LF	24" CROSSWALK LINE, WHITE, AS PER PLAN	17
<b>LIGHTING</b>										
1000					172	1000	172	LF	STREET LIGHT CIRCUIT, 2-#4-5KV CABLES (MIS-14)	
1000					60	1000	60	LF	2" CONDUIT IN OPEN AREAS (MIS-15)	
1000					46	1000	46	LF	2" CONDUIT UNDER CONCRETE SIDEWALK (MIS-16)	
1000					23	1000	23	LF	2" CONDUIT UNDER STREET PAVEMENT (MIS-17)	
1000					1	1000	1	EACH	480V STREET LIGHT CIRCUIT RISER (MIS-44)	
1000					2	1000	2	EACH	LAMP POST FOUNDATION (MIS-25)	
1000					2	1000	2	EACH	FIBERGLASS DECORATIVE LAMP POST (MIS-91)	
1000					2	1000	2	EACH	POST TOP LUMINAIRE, 100W, 480V ACORN TYPE (MIS-51)	
1000					2	1000	2	EACH	POLE (13' MH) TO BE WIRED, ANCHOR BASE (MIS-41)	
1000					2	1000	2	EACH	PULL BOX, MEDIUM DUTY, 13"x24" (MIS-4)	
<b>MISCELLANEOUS</b>										
202						202	LUMP	SUM	CLEARING & GRUBBING	
614						614	LUMP	SUM	MAINTAINING TRAFFIC	
614						614	480	HOURS	LAW ENFORCEMENT OFFICER WITHOUT PATROL CAR	
623						623	LUMP	SUM	CONSTRUCTION LAYOUT STAKES	
624						624	LUMP	SUM	MOBILIZATION	
207						207	5	EACH	INLET PROTECTION - BEAVER DAMS (CONTINGENCY)	

**GENERAL SUMMARY - ALTERNATE BID ITEMS**

ITEM	SHEET NUMBER					ITEM	TOTAL	UNIT	DESCRIPTION	SEE SHEET
	13	15	16	22	23					
<b>ALTERNATE 1-BRICK CROSSWALK AT 5TH AVE NEAR 315</b>										
202	45					202	45	SY	PAVEMENT REMOVED AND DISPOSED OF	
413	60					413	60	LF	CRACK SEALING, HOT APPLIED	
452	73					452	73	SY	8" CONCRETE BAND FOR CROSSWALK	
SPEC.	655					SPEC.	655	SF	CROSSWALK BRICK PAVING, COMPLETE IN PLACE, AS PER PLAN	12
SPEC.	60					SPEC.	60	LF	CONCRETE EDGE (12"x2'), AS PER PLAN	13
<b>ALTERNATE 2-WEST BRICK CROSSWALK AT 5TH AVE NEAR PERRY ST</b>										
202	45					202	45	SY	PAVEMENT REMOVED AND DISPOSED OF	
413	68					413	68	LF	CRACK SEALING, HOT APPLIED	
452	45					452	45	SY	8" CONCRETE BAND FOR CROSSWALK	
807	2					807	2	EACH	VALVE BOXES ADJUSTED TO GRADE	
SPEC.	337					SPEC.	337	SF	CROSSWALK BRICK PAVING, COMPLETE IN PLACE, AS PER PLAN	13
SPEC.	68					SPEC.	68	LF	CONCRETE EDGE (12"x2'), AS PER PLAN	13
<b>ALTERNATE 3-CAST STONE VENEER AT 5TH AVE NEAR 315</b>										
SPEC.		172				SPEC.	172	LF	CAST STONE VENEER WALL PIECES (2' HT), AS PER PLAN	12
SPEC.		172				SPEC.	172	LF	CAST STONE CAPS (2.25" THICKNESS x 8" WIDTH), AS PER PLAN	12
<b>ALTERNATE 4-N.A.</b>										
<b>ALTERNATE 5-ADDITIONAL LIGHTING AT 5TH AVE NEAR PERRY ST</b>										
630					1	630	1	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
1000					44	1000	44	LF	STREET LIGHT CIRCUIT, TWO-#4-5KV CABLES (MIS-14)	
1000					4	1000	4	LF	2" CONDUIT IN OPEN AREAS (MIS-15)	
1000					36	1000	36	LF	2" CONDUIT UNDER PAVEMENT (MIS-17)	
1000					1	1000	1	EACH	LAMP POST FOUNDATION (MIS-25)	
1000					1	1000	1	EACH	FIBERGLASS DECORATIVE LAMP POST (MIS-91)	
1000					1	1000	1	EACH	POST TOP LUMINAIRE, 100W, 480V ACORN TYPE (MIS-51)	
1000					1	1000	1	EACH	POLE (13' MH) TO BE WIRED, ANCHOR BASE (MIS-41)	
1000					1	1000	1	EACH	PULL BOX, MEDIUM DUTY, 13"x24" (MIS-4)	
<b>ALTERNATE 6-LANDSCAPE AT 5TH AVE NEAR 315</b>										
SPEC.					26	SPEC.	26	CY	TOPSOIL, AS PER PLAN	12
SPEC.					7	SPEC.	7	EACH	ORNAMENTAL TREES	
SPEC.					1684	SPEC.	1684	EACH	GROUND COVER/PERENNIALS	
SPEC.					842	SPEC.	842	EACH	BULBS	
1000					50	1000	50	L.F.	1 1/2" CABLE -IN-DUCT, TRENCHLESS INSTALLATION (MIS-124)	
<b>ALTERNATE 7-LANDSCAPE AT 5TH AVE NEAR PERRY ST</b>										
SPEC.					18	SPEC.	18	CY	TOPSOIL, AS PER PLAN	13
SPEC.					9	SPEC.	9	EACH	ORNAMENTAL TREES	
SPEC.					30	SPEC.	16	EACH	SHRUBS	
SPEC.					290	SPEC.	692	EACH	GROUND COVER/PERENNIALS	
SPEC.					370	SPEC.	424	EACH	BULBS	
<b>ALTERNATE 8-EAST BRICK CROSSWALK AT 5TH AVE NEAR PERRY ST</b>										
202	41					202	41	SY	PAVEMENT REMOVED AND DISPOSED OF	
413	45					413	45	LF	CRACK SEALING, HOT APPLIED	
452	43					452	43	SY	8" CONCRETE BAND FOR CROSSWALK	
SPEC.	322					SPEC.	322	SF	CROSSWALK BRICK PAVING, COMPLETE IN PLACE, AS PER PLAN	13
SPEC.	45					SPEC.	45	LF	CONCRETE EDGE (12"x2'), AS PER PLAN	13

Drawing: K:\21601\Eng\Tfm East of Olentangy\21601TfmEast.dwg Saved on: 07-03-08 08:21 Revised by: adm -1 Issue: 100 -Plot scale: 1"=50' P/S





**Legend**

TC	Top of Casting	⊙	Ex. Curb Inlet
□	Ex. Catch Basin	—UGE—	Ex. Underground Electric
⊙	Ex. Curb Inlet	—OHE—	Ex. Overhead Electric
○	Ex. Manhole	—UGC—	Ex. Underground Cable
⊙	Ex. Fire Hydrant	—G—	Ex. Gas Line
⊙	Ex. Valve	—W—	Ex. Water Line
⊙	Ex. Utility Pole	—S—	Ex. Sanitary Sewer
—SS—	Ex. Storm Sewer	⊙	Ex. Tree

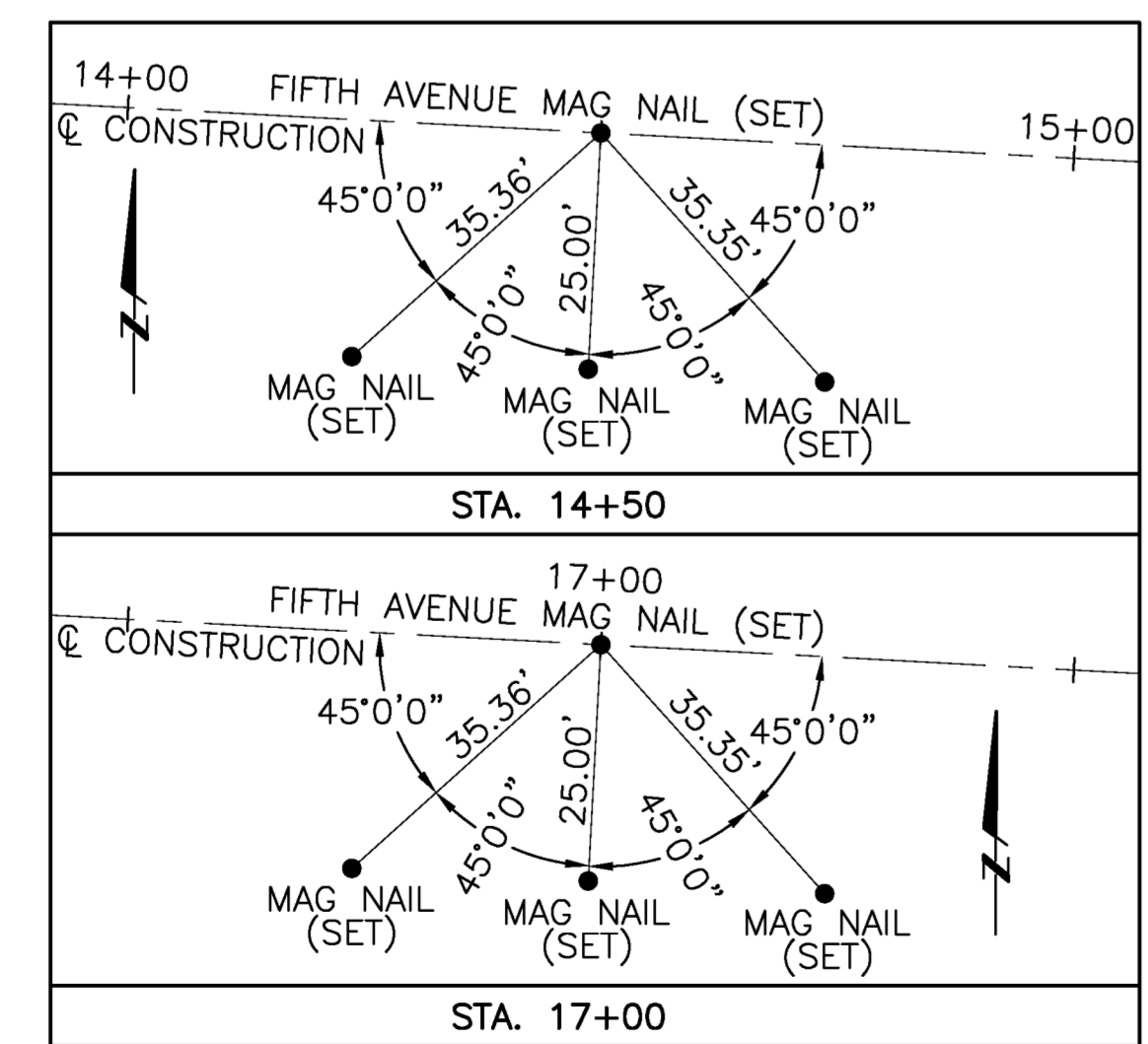


CALCULATED WRH CHECKED JNM  
**PLAN SHEET**  
**FIFTH AVE. BETWEEN OLENTANGY RIVER RD. AND PERRY ST.**

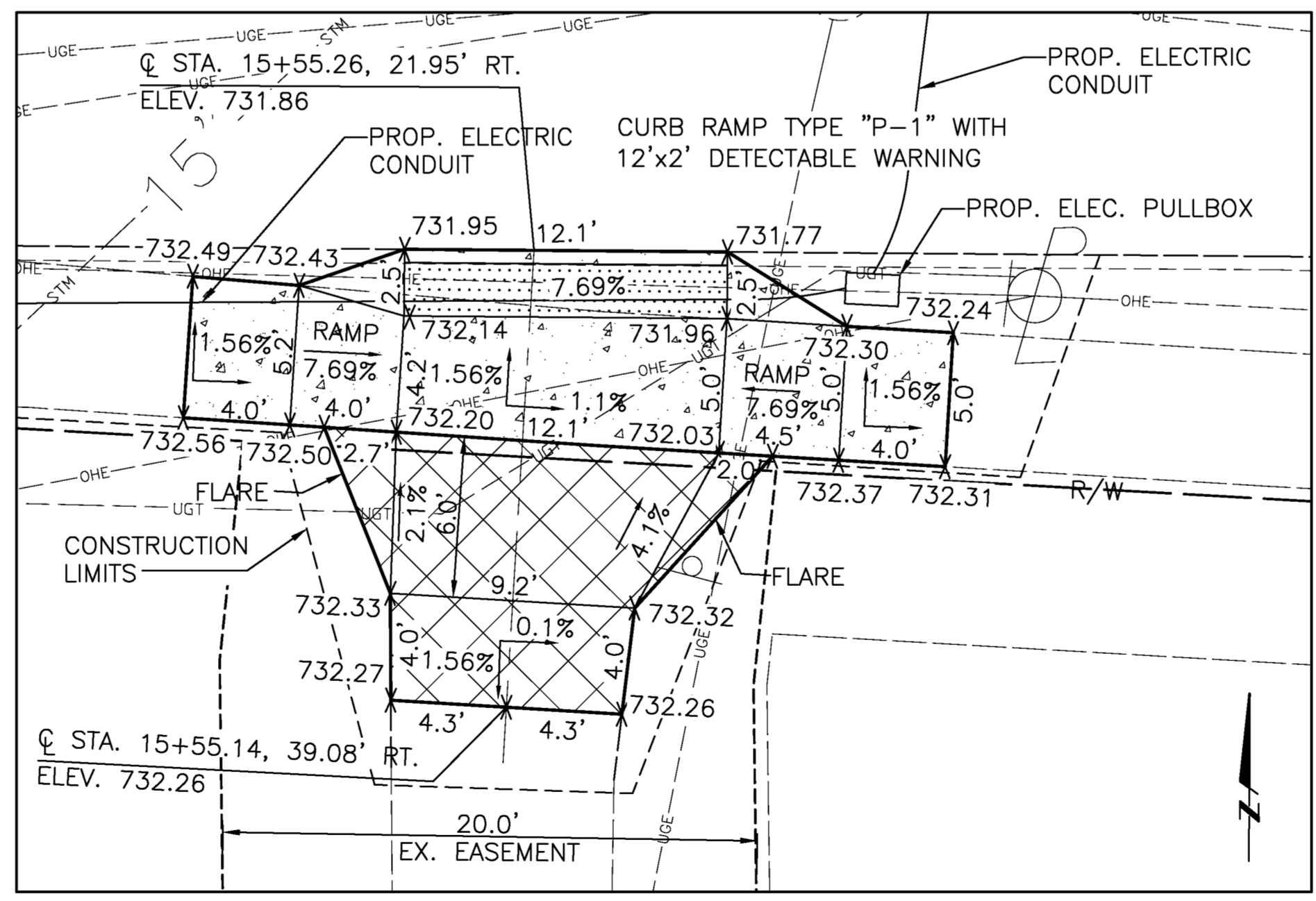
- LEGEND**
- \* CONNECT PLANTER UNDERDRAINS TO CURB UNDERDRAINS
  - \*\* CONNECT UNDERDRAINS TO MANHOLE, ITEM 901 6" PIPE, WITH TYPE 1 BEDDING AND ITEM 910 PLAIN CONCRETE ENCASEMENT OF 6" DIAMETER PIPE
  - ▨ ASPHALT PATH REPLACEMENT, PER STD DWG 2442
  - ▩ CONCRETE WALK REPLACEMENT

NOTE: STREETSCAPE FEATURES SHOWN ARE SCHEMATIC ONLY.

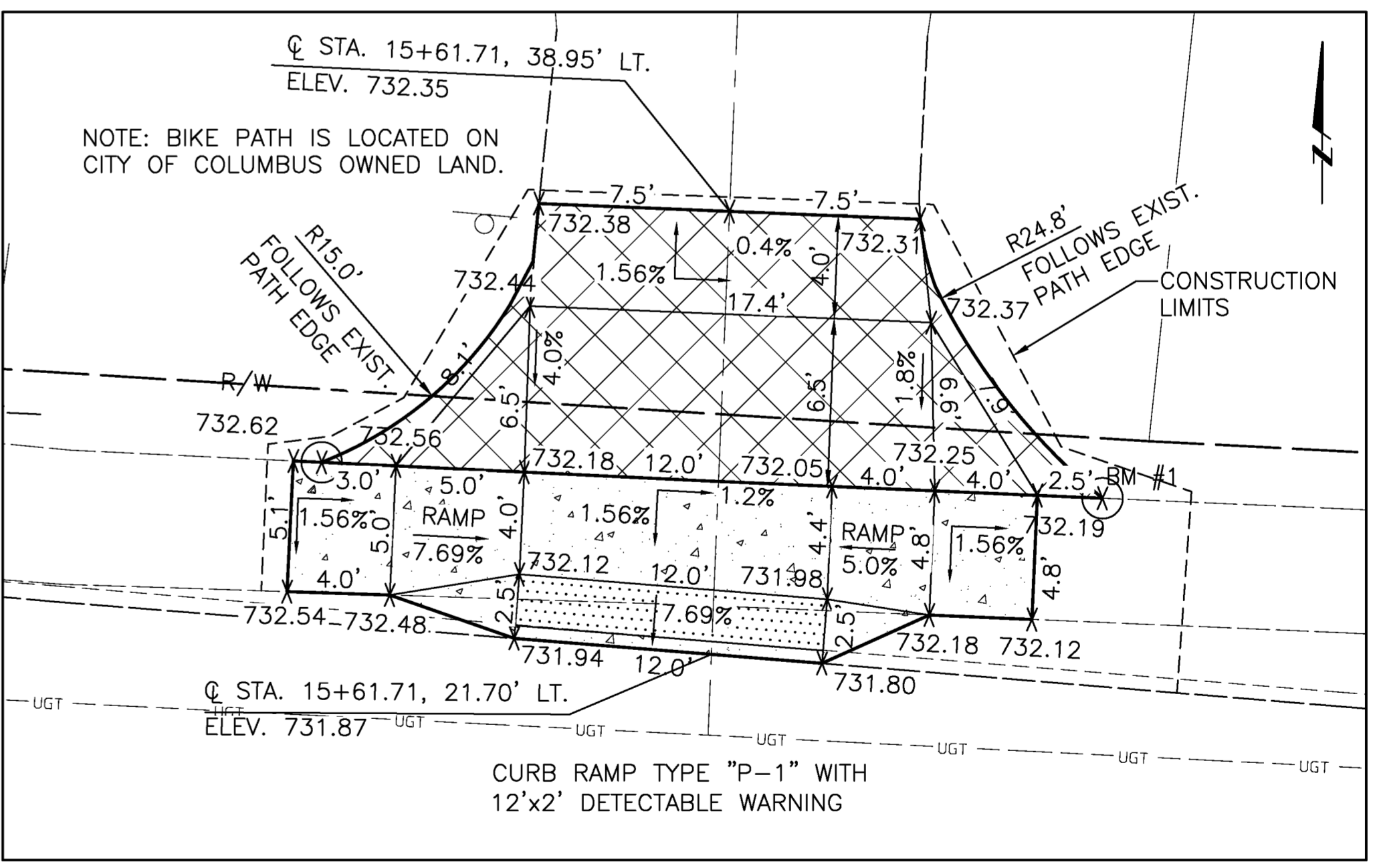
BM#1: MAG NAIL SET 38.05' W. AND 12.45' N. OF M.H. FOUND ON N. EDGE OF FIFTH AVE. 54'± E. OF OLENTANGY BIKEWAY C.L. STA. 15+75.93, 29.14' LT., ELEV. 732.07



**CENTERLINE REFERENCES**  
SCALE: 1"=20'



**SOUTH CURB RAMP**  
SCALE: 1"=5'



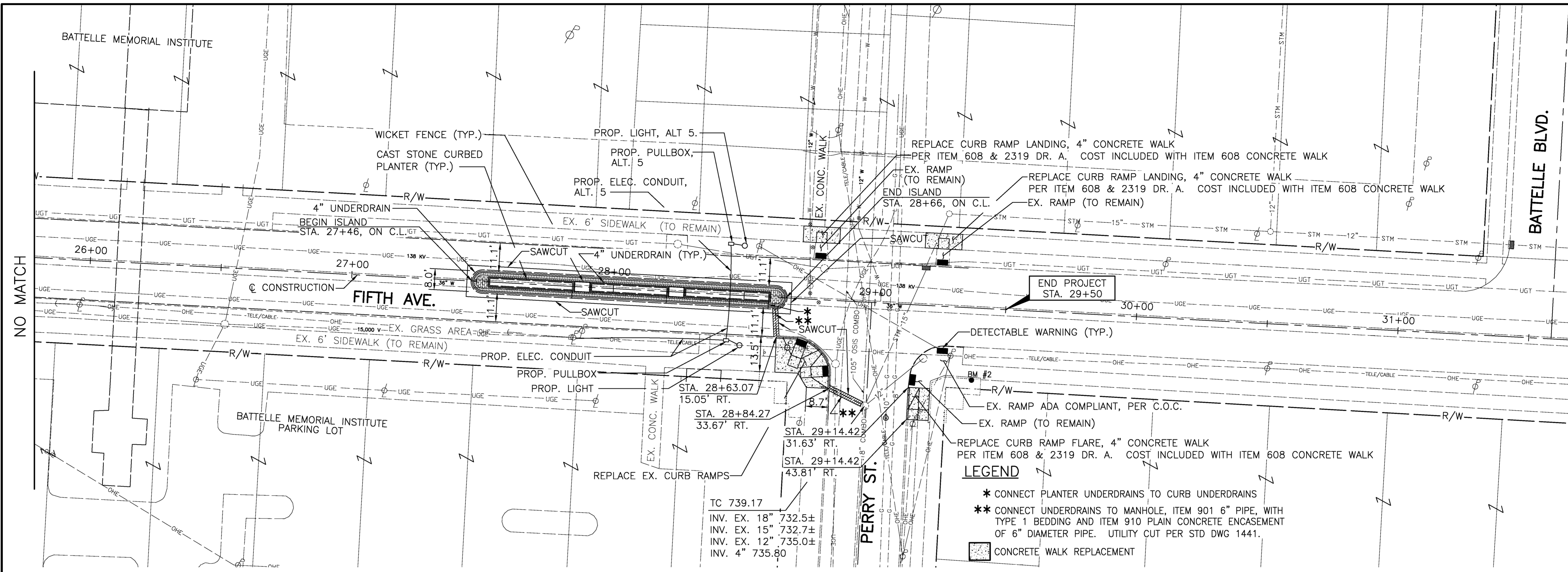
**NORTH CURB RAMP**  
SCALE: 1"=5'

NOTE: DETECTABLE WARNINGS SHALL BE AS PER CITY OF COLUMBUS SUPPLEMENTAL SPECIFICATION 1551.

**SSI OVERALL TRAFFIC MANAGEMENT PLAN**  
**CITY OF COLUMBUS**

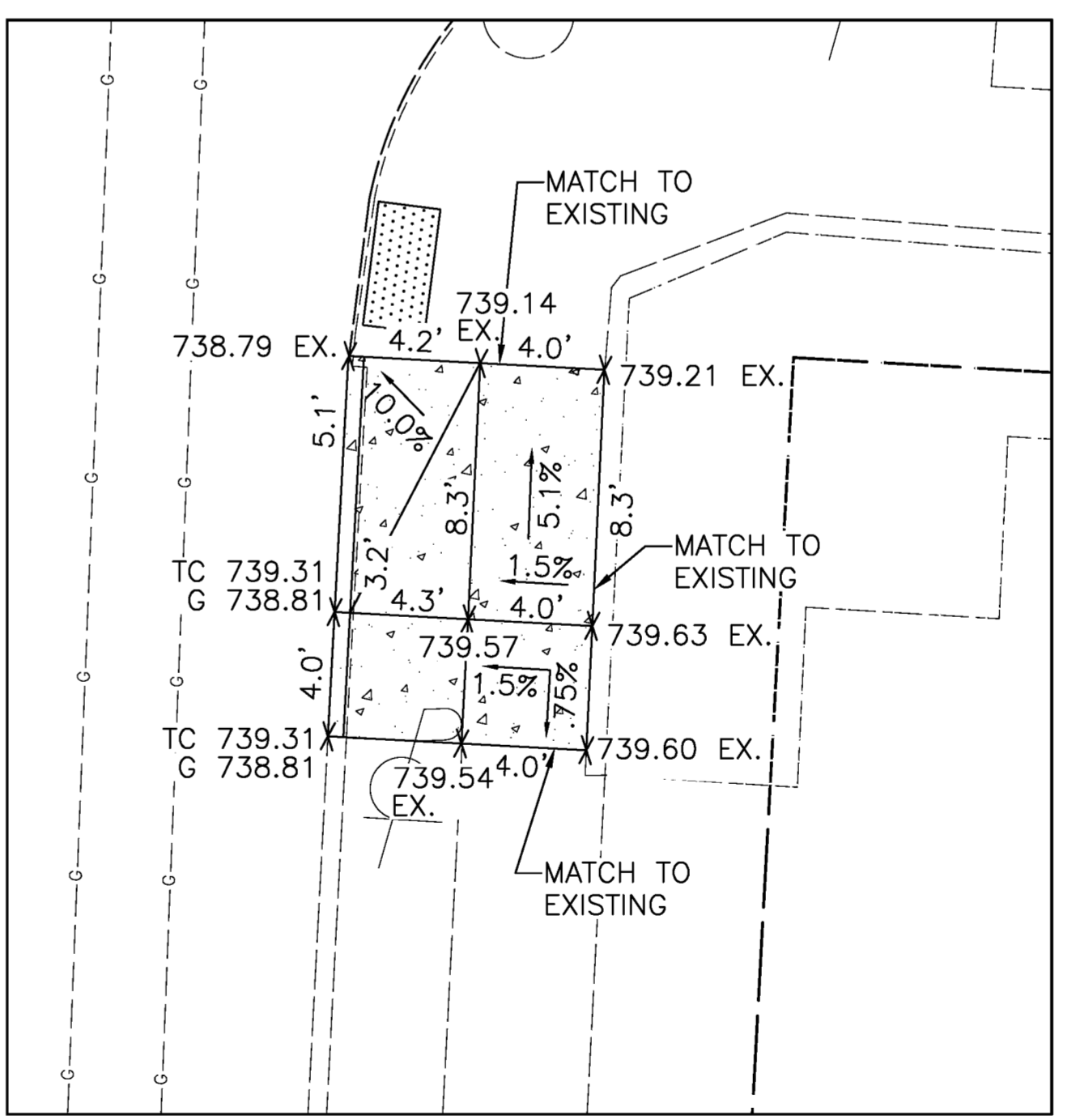
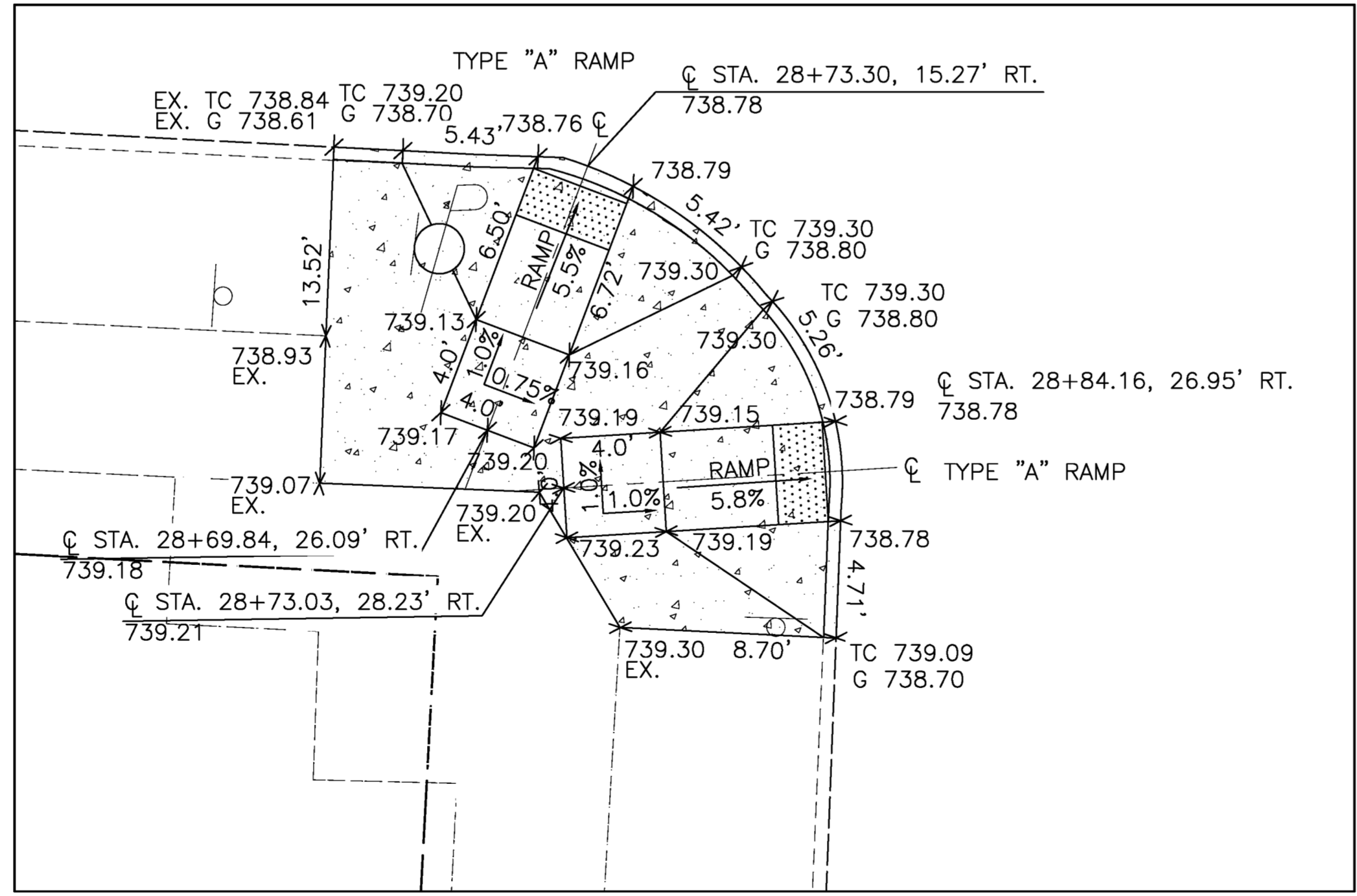
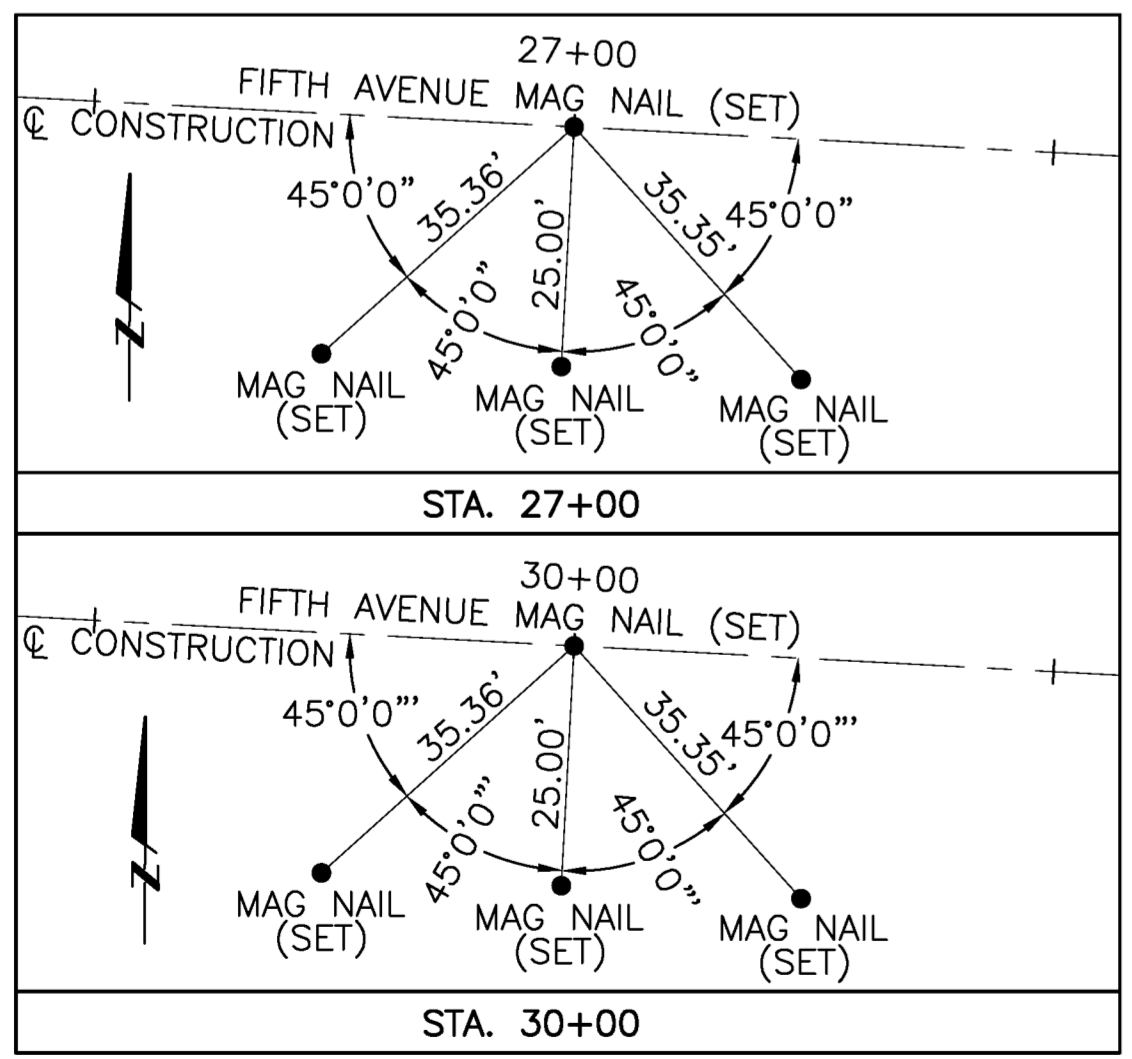
Drawing: K:\210105\05\Fifth East of Olen tangy\210105\FifthEast.dwg View: V2 Saved on: 05-19-2010 14:10 Plotted by: cdm -L:scale: 1"=20' PS





NOTE: STREETSCAPE FEATURES SHOWN ARE SCHEMATIC ONLY.

BM#2: MAG NAIL SET 18.36' E. AND 8.27' S. OF M.H. FOUND AT S.E. CORNER OF FIFTH AVE. AND PERRY ST. STA. 29+38.31, 27.58 RT., ELEV. 739.96



- Legend**
- TC Top of Casting
  - Ex. Catch Basin
  - Ex. Curb Inlet
  - Ex. Manhole
  - Ex. Fire Hydrant
  - Ex. Valve
  - Ex. Utility Pole
  - Ex. Storm Sewer
  - Ex. Curb Inlet
  - Ex. Underground Electric
  - Ex. Overhead Electric
  - Ex. Underground Cable
  - Ex. Gas Line
  - Ex. Water Line
  - Ex. Sanitary Sewer
  - Ex. Tree

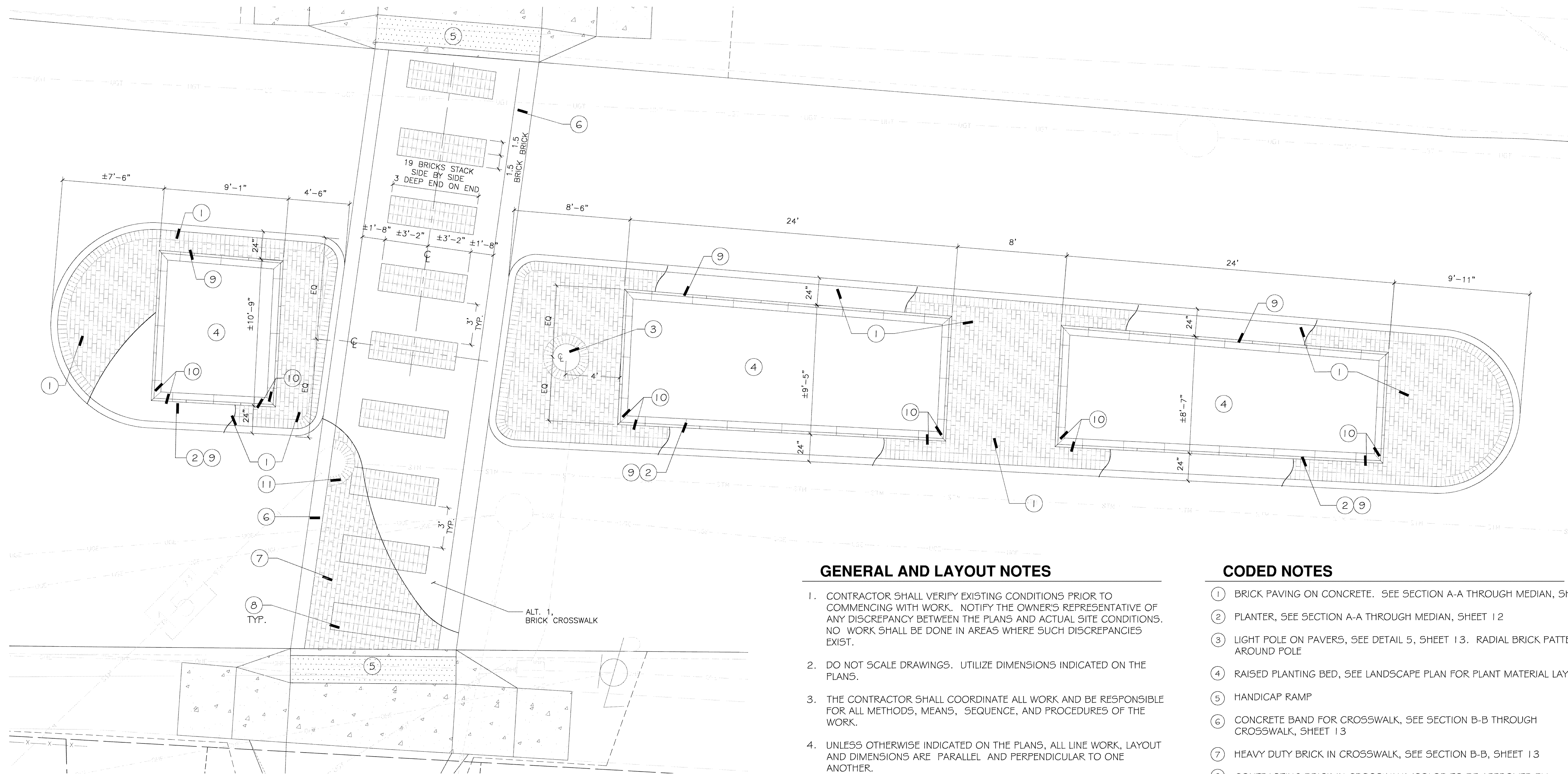
Drawing: K:\210105\05\11th East of Olentangy\210105\11thMed.dwg View: V1 Saved on: 07-03-08 09:06 P:\Released by: cdm -L:\locat: 1:00 -100 scale 1=100/PS



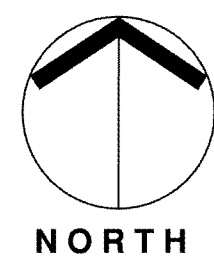








**5th Ave near 315**  
SCALE: 1/4" = 1'-0"



**GENERAL AND LAYOUT NOTES**

1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WITH WORK. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCY BETWEEN THE PLANS AND ACTUAL SITE CONDITIONS. NO WORK SHALL BE DONE IN AREAS WHERE SUCH DISCREPANCIES EXIST.
2. DO NOT SCALE DRAWINGS. UTILIZE DIMENSIONS INDICATED ON THE PLANS.
3. THE CONTRACTOR SHALL COORDINATE ALL WORK AND BE RESPONSIBLE FOR ALL METHODS, MEANS, SEQUENCE, AND PROCEDURES OF THE WORK.
4. UNLESS OTHERWISE INDICATED ON THE PLANS, ALL LINE WORK, LAYOUT AND DIMENSIONS ARE PARALLEL AND PERPENDICULAR TO ONE ANOTHER.
5. DO NOT DISTURB AREAS OUTSIDE OF CONSTRUCTION LIMITS WITHOUT PRIOR APPROVAL OF OWNER'S REPRESENTATIVE.
6. PROTECT EXISTING FACILITIES DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES RESULTING FROM CONSTRUCTION ACTIVITIES.
7. SEE ENGINEERING PLANS FOR SPOT GRADES. MAINTAIN POSITIVE DRAINAGE IN ALL AREAS.
8. LOCATE AND PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION ACTIVITIES. CONTACT OHIO UTILITIES PROTECTION SERVICE AT 1-800-362-2764 PRIOR TO EXCAVATION.
9. NOTIFY OWNER AND OWNER'S REPRESENTATIVE TO REVIEW LAYOUT STAKING AND DIRECT FIELD MODIFICATIONS AS NEEDED PRIOR TO PROCEEDING WITH CONSTRUCTION ACTIVITIES

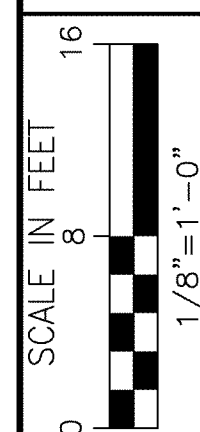
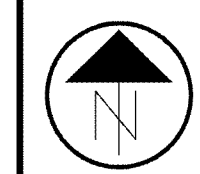
**CODED NOTES**

- ① BRICK PAVING ON CONCRETE. SEE SECTION A-A THROUGH MEDIAN, SHEET 12
- ② PLANTER, SEE SECTION A-A THROUGH MEDIAN, SHEET 12
- ③ LIGHT POLE ON PAVERS, SEE DETAIL 5, SHEET 13. RADIAL BRICK PATTERN AROUND POLE
- ④ RAISED PLANTING BED, SEE LANDSCAPE PLAN FOR PLANT MATERIAL LAYOUT
- ⑤ HANDICAP RAMP
- ⑥ CONCRETE BAND FOR CROSSWALK, SEE SECTION B-B THROUGH CROSSWALK, SHEET 13
- ⑦ HEAVY DUTY BRICK IN CROSSWALK, SEE SECTION B-B, SHEET 13
- ⑧ CONTRASTING BRICK IN CROSSWALK (COLOR TO BE APPROVED BY TRANSPORTATION DIVISION)
- ⑨ PLANTER WALL TO BE PARRALLEL TO CURB FACE
- ⑩ PLANTER WALLS TO BE PERPENDICULAR
- ⑪ RADIAL BRICK PATTERN AROUND MANHOLE



WEST PLANTER AND PAVER LAYOUT  
 FIFTH AVE. EAST OF OLENTANGY RIVER RD  
 CALCULATED: EBP  
 CHECKED: SJK

SSI OVERALL TRAFFIC MANAGEMENT PLAN  
 CITY OF COLUMBUS



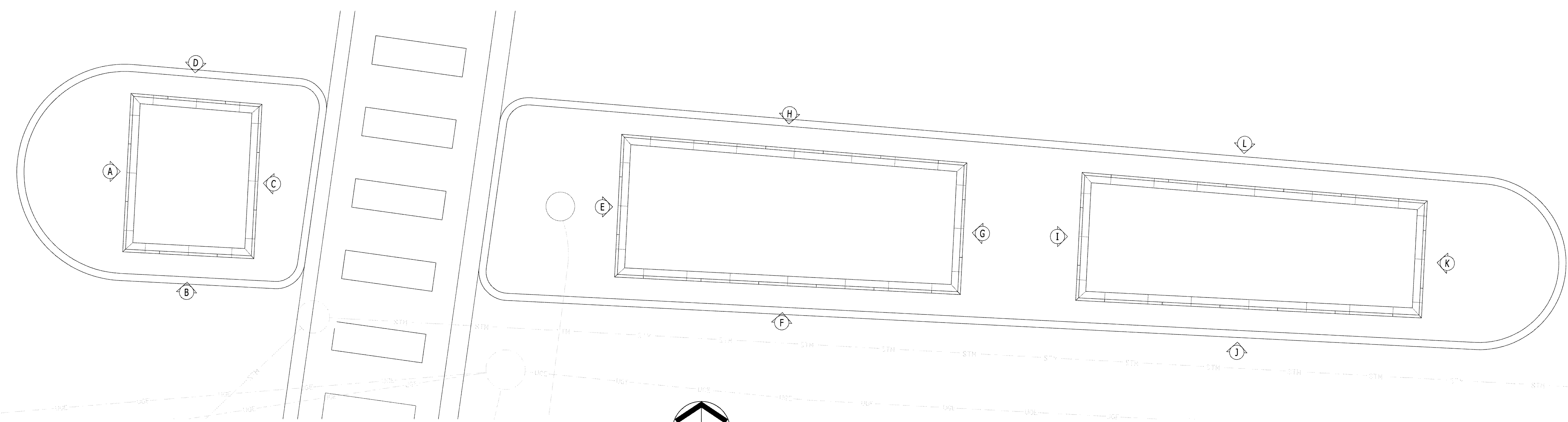
CALCULATED  
EBP  
CHECKED  
SJK

WEST ALT 3 CAST STONE ELEVATION  
FIFTH AVE. EAST OF OLENTANGY RIVER RD

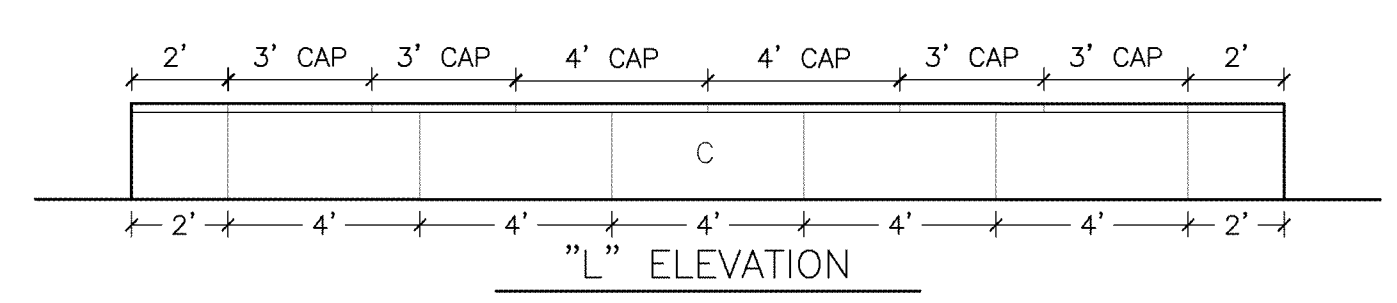
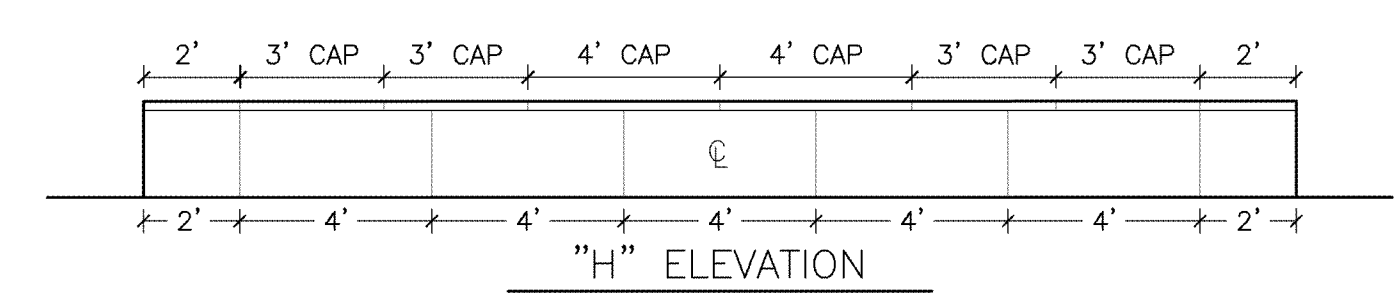
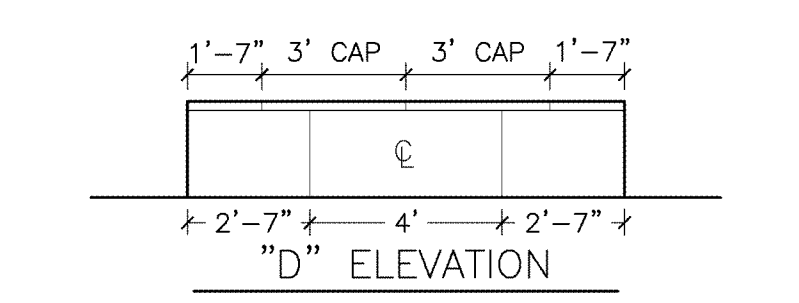
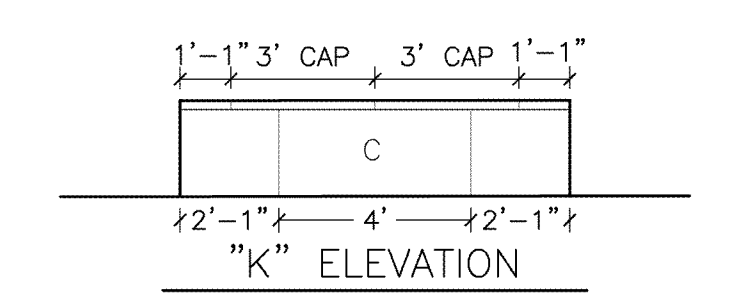
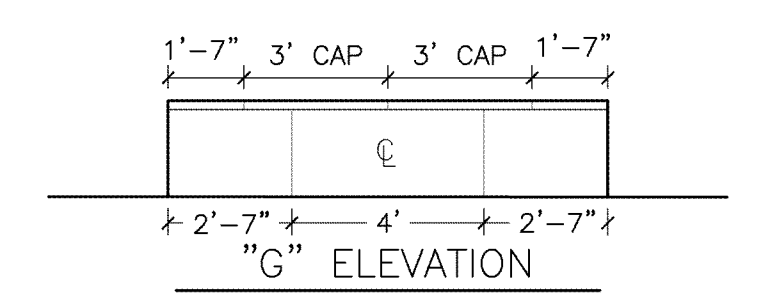
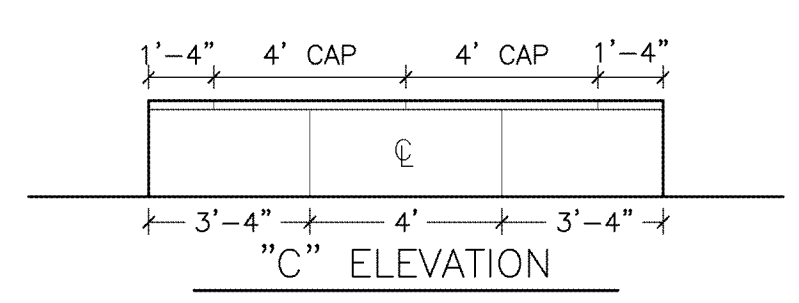
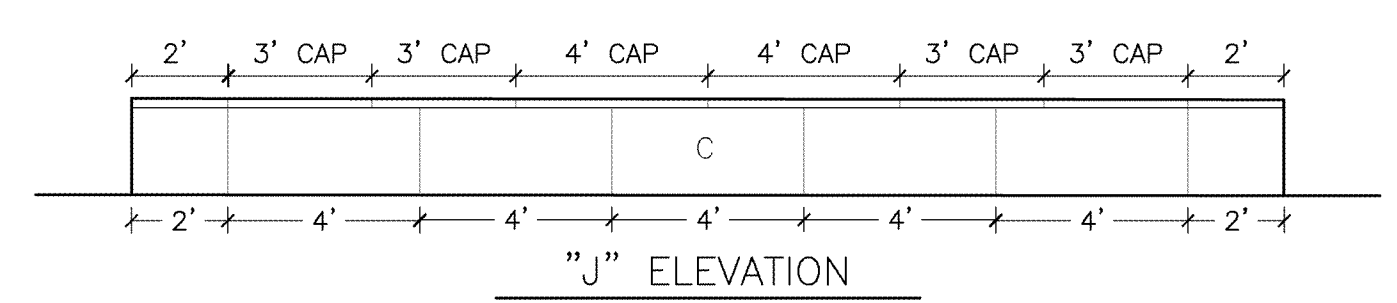
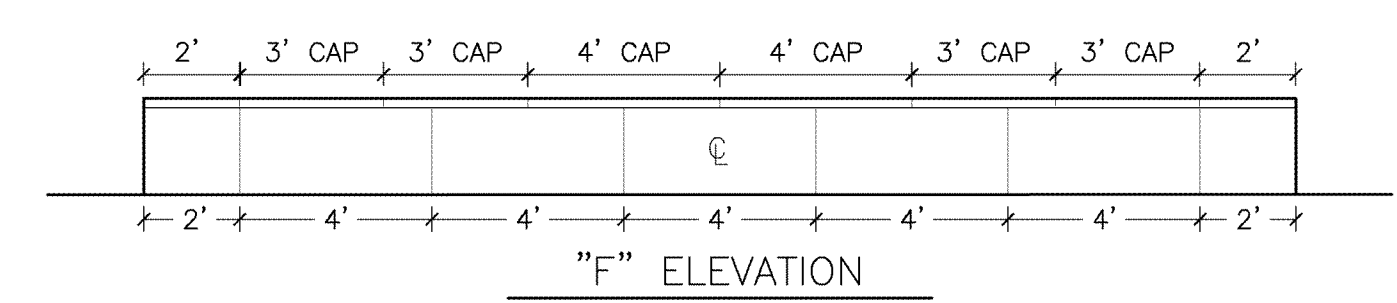
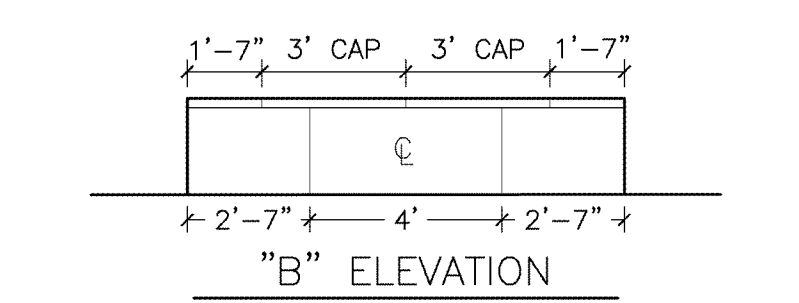
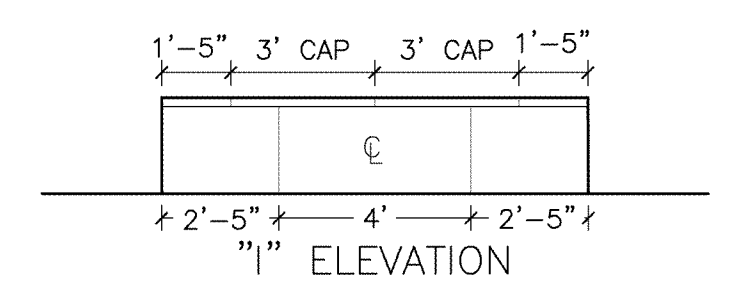
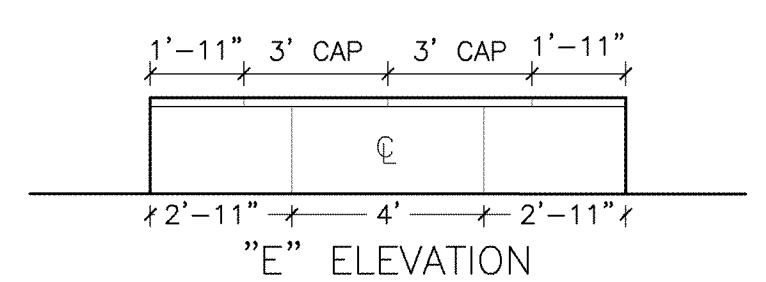
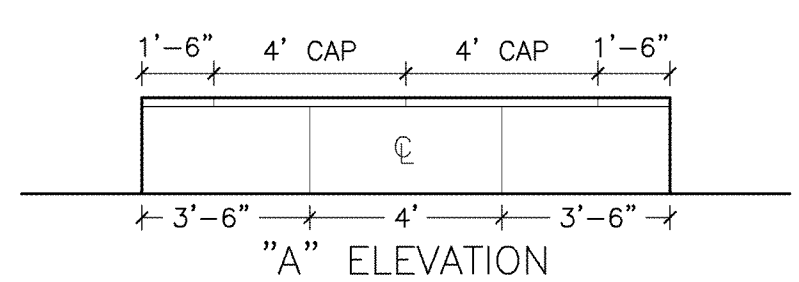
SSI OVERALL TRAFFIC MANAGEMENT PLAN  
CITY OF COLUMBUS

15  
22

2321 E



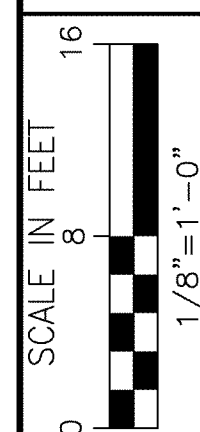
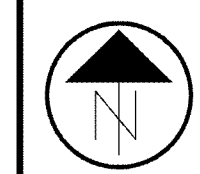
**5th Ave near 315**  
SCALE: 1/4" = 1'-0"



**ALT. 3 CAST STONE VENEER DETAILS**  
SCALE: 1/4" = 1'-0"





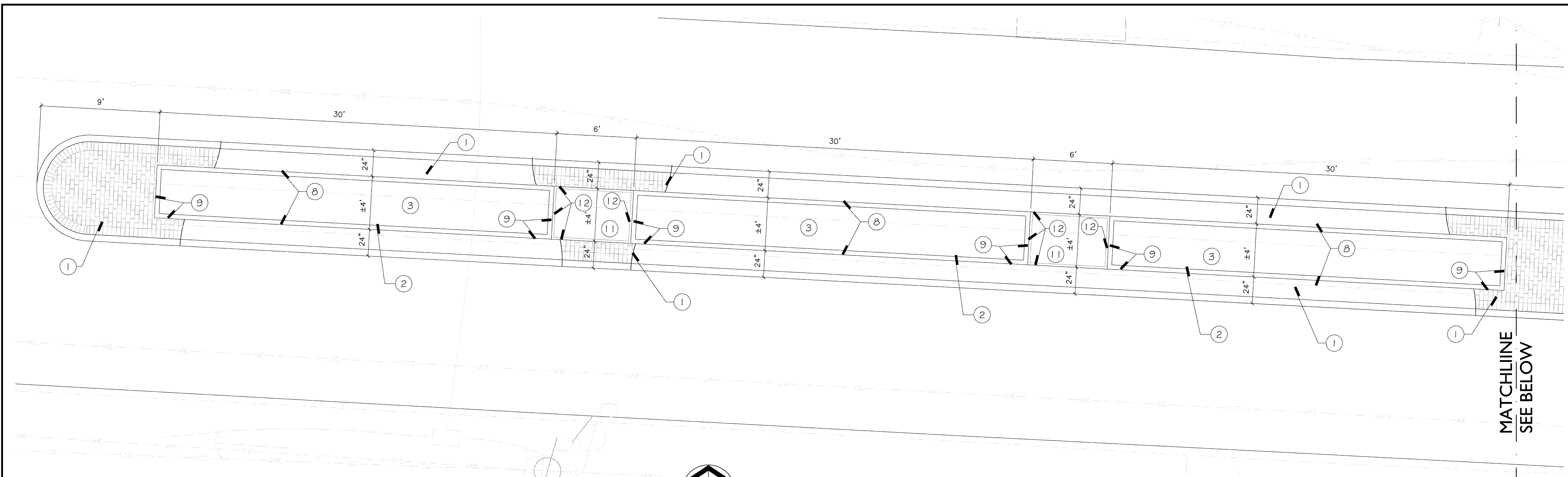


CALCULATED  
EBP  
CHECKED  
SJK

**EAST PLANTER AND PAVER LAYOUT**  
FIFTH AVE. EAST OF OLENTANGY RIVER RD

**SSI OVERALL TRAFFIC MANAGEMENT PLAN**  
CITY OF COLUMBUS

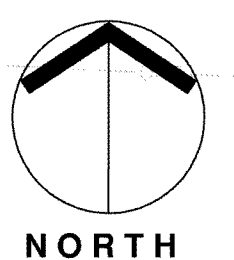
16  
22



MATCHLINE  
SEE BELOW

**FIFTH AVE NEAR PERRY - WEST PLANTER**

SCALE: 1/4" = 1'-0"

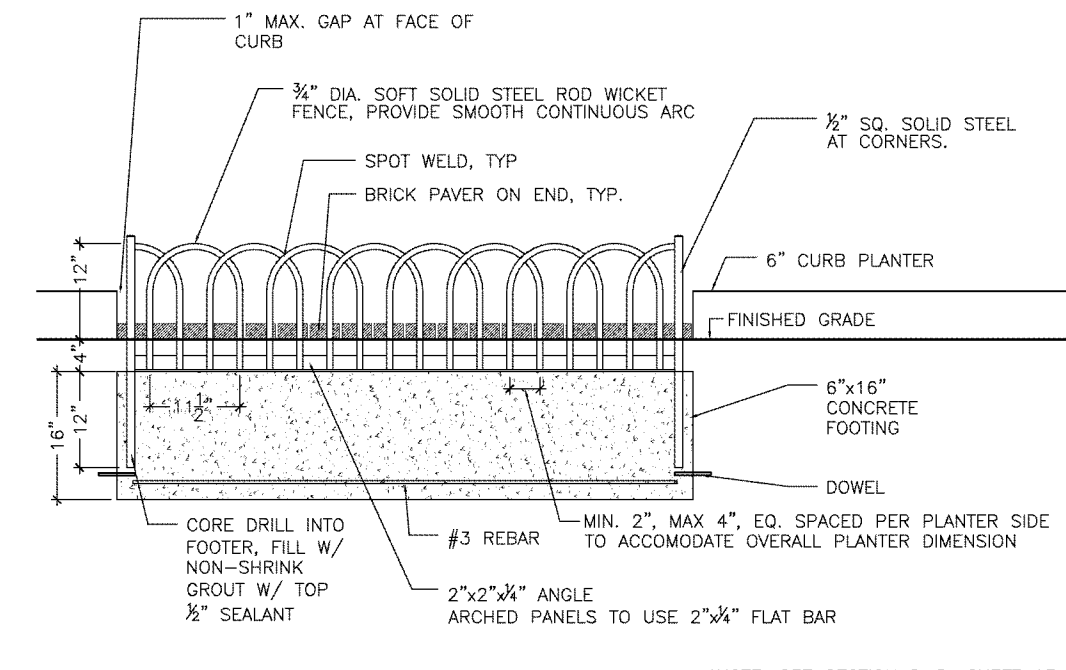


**GENERAL AND LAYOUT NOTES**

- CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WITH WORK. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCY BETWEEN THE PLANS AND ACTUAL SITE CONDITIONS. NO WORK SHALL BE DONE IN AREAS WHERE SUCH DISCREPANCIES EXIST.
- DO NOT SCALE DRAWINGS. UTILIZE DIMENSIONS INDICATED ON THE PLANS.
- THE CONTRACTOR SHALL COORDINATE ALL WORK AND BE RESPONSIBLE FOR ALL METHODS, MEANS, SEQUENCE, AND PROCEDURES OF THE WORK.
- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL LINE WORK, LAYOUT AND DIMENSIONS ARE PARALLEL AND PERPENDICULAR TO ONE ANOTHER.
- DO NOT DISTURB AREAS OUTSIDE OF CONSTRUCTION LIMITS WITHOUT PRIOR APPROVAL OF OWNER'S REPRESENTATIVE.
- PROTECT EXISTING FACILITIES DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES RESULTING FROM CONSTRUCTION ACTIVITIES.
- SEE ENGINEERING PLANS FOR SPOT GRADES. MAINTAIN POSITIVE DRAINAGE IN ALL AREAS.
- LOCATE AND PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION ACTIVITIES. CONTACT OHIO UTILITIES PROTECTION SERVICE AT 1-800-362-2764 PRIOR TO EXCAVATION.
- NOTIFY OWNER AND OWNER'S REPRESENTATIVE TO REVIEW LAYOUT STAKING AND DIRECT FIELD MODIFICATIONS AS NEEDED PRIOR TO PROCEEDING WITH CONSTRUCTION ACTIVITIES

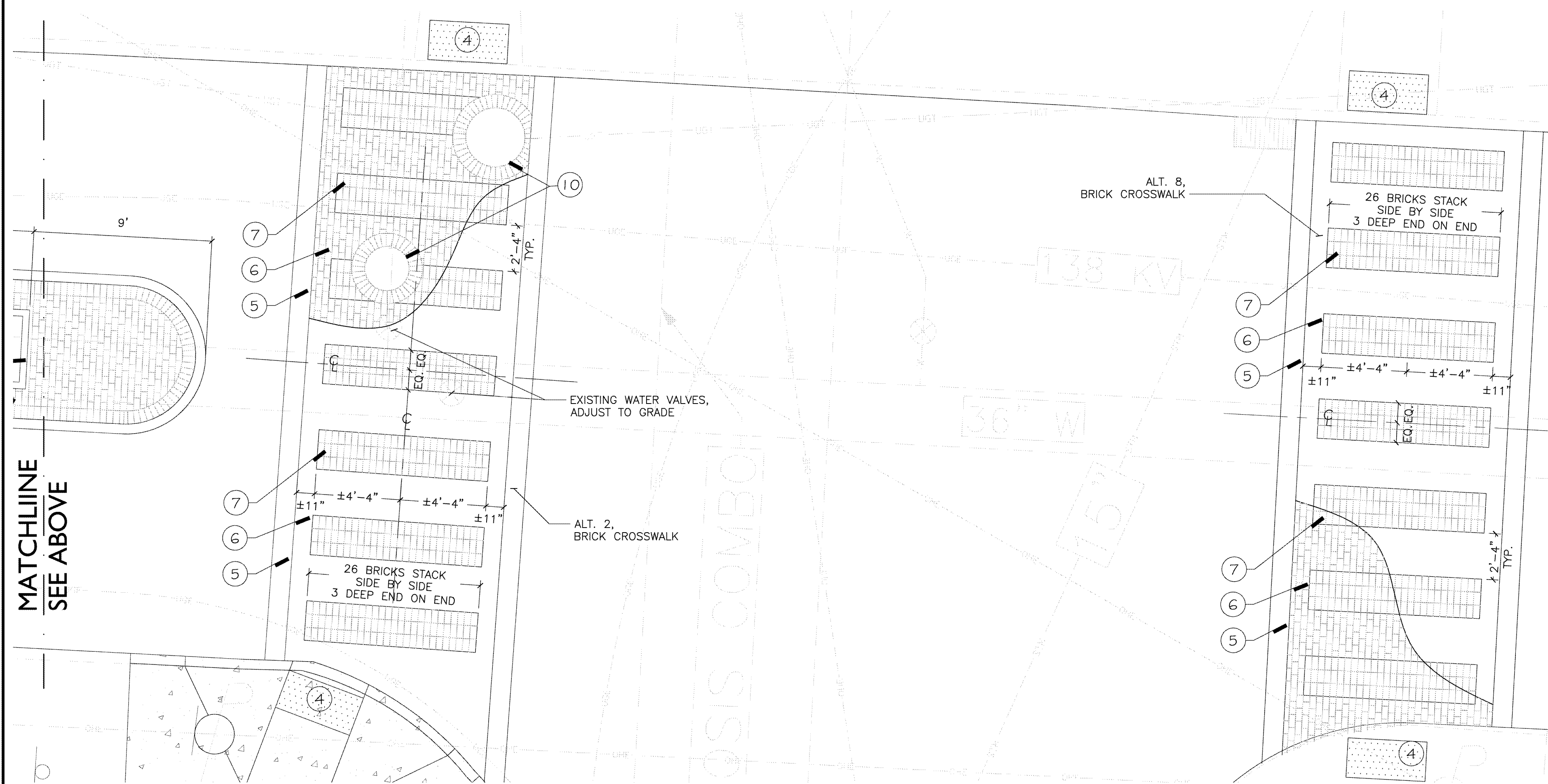
**CODED NOTES**

- BRICK PAVING ON CONCRETE. SEE SECTION A-A THROUGH MEDIAN, SHEET 12
- CAST STONE CURBED PLANTER, SEE SECTION C-C, SHEET 13
- CURBED PLANTING BED, SEE LANDSCAPE PLAN FOR PLANT MATERIAL LAYOUT
- HANDICAP RAMP
- CONCRETE BAND FOR CROSSWALK, SEE SECTION B-B THROUGH CROSSWALK, SHEET 13
- HEAVY DUTY BRICK IN CROSSWALK, SEE SECTION B-B, SHEET 13
- CONTRASTING BRICK IN CROSSWALK (COLOR TO BE APPROVED BY TRANSPORTATION DIVISION)
- PLANTER CURB TO BE PARRALLEL TO CURB FACE
- PLANTER CURBS TO BE PERPENDICULAR
- RADIAL BRICK PATTERN AROUND MANHOLE
- FLUSH PLANTER, SEE LANDSCAPE PLAN FOR PLANT MATERIAL LAYOUT AND SEE SECTION D-D, SHEET 13
- WICKET FENCE. SEE DETAIL BELOW



\*NOTE: SEE SECTION D-D, SHEET 13

**WICKET FENCE DETAIL**  
SCALE: 1/2" = 1'-0"



MATCHLINE  
SEE ABOVE

**FIFTH AVE NEAR PERRY - EAST PLANTER**

SCALE: 1/4" = 1'-0"

E.P. FERRIS & ASSOCIATES INC      POD DESIGN

2321 E

Drawing: K:\216010\04\17th East of Olentangy\216010.dwg (17th East of Olentangy) - L1:Scale: 1:00 - Plot: scale: 1=1 1/8"=1'-0"

**STREET NAME SIGNS**

ALL REMOVAL OF STREET NAME SIGNS, REQUIRED UNDER THIS CONTRACT, SHALL BE DONE WITH EXTREME CARE TO AVOID DAMAGE. REMOVAL SHALL BE ACCOMPLISHED BY CUTTING THE STAINLESS STEEL STRAPS, WHICH BAND THE SIGN TO THE STANDARD. THE SIGNS SHALL BE HANDLED IN SUCH A MANNER AS TO AVOID SCRATCHING THE SHEETING OR DAMAGING THE ASSEMBLY. ANY STREET NAME SIGN, WHICH IS DAMAGED, SHALL BE REPLACED BY THE CITY OF COLUMBUS, DIVISION OF TRANSPORTATION; THE INCURRING COST OF REPLACING THE SIGN WILL BE BILLED TO THE CONTRACTOR.

**TRAFFIC SIGNS TO BE REPLACED**

THE CONTRACTOR, AS PART OF THIS PROJECT, SHALL REPLACE ALL CITY OF COLUMBUS TRAFFIC SIGNS THAT ARE LOCATED INSIDE THE LIMITS OF THIS PROJECT. THE CONTRACTOR SHALL REMOVE ALL TRAFFIC SIGNS AND SIGN SUPPORTS AND DELIVER THEM TO THE TRAFFIC MAINTENANCE SHOP AT 1820 EAST 17TH EAST AVENUE (PHONE #(614) 645-7393). THE CONTRACTOR SHALL PURCHASE NEW SIGNS AND SIGN SUPPORTS TO INSTALL AS INDICATED ON THE PLANS OR IF NOT SHOWN THEN AT THE PREVIOUS LOCATION FOR THE SIGN BEING REPLACED. PERFORMANCE OF AND PAYMENT FOR THIS WORK SHALL BE AS PER ITEM 630 "TRAFFIC SIGNS AND SIGN SUPPORTS" FROM THE C.O.C. CONSTRUCTION AND MATERIAL SPECIFICATIONS.

**C.O.T.A. SIGNS AND/OR BUS STOPS**

PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONTACT JIM HUTCHERSON OF THE CENTRAL OHIO TRANSIT AUTHORITY (C.O.T.A) AT PH#(614) 308-4373, FAX#(614) 275-5933, OR E-MAIL: hutchersonjm@cota.com TO COORDINATE PROPER BUS MOVEMENTS THROUGH OR AROUND THE JOB SITE DURING THE PROJECT. THIS WILL INCLUDE, BUT NOT BE LIMITED TO, THE TEMPORARY RELOCATION OR REMOVAL OF C.O.T.A. SIGNS AND/OR BUS STOP LOCATIONS.

**ITEM 630 SIGNS. FLAT SHEET TYPE "H". AS PER PLAN**

IN ADDITION TO ALL SIGNS CONFORMING TO ITEM 630, THE BACK OF THE SIGNS SHALL BE PAINTED WITH FLAT BLACK THERMOSET POLYESTER POWDER COAT FINISH.

**ITEM 630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL AS PER PLAN**

ALL SIGNS REMOVED SHALL BE RETURNED TO THE CITY OF COLUMBUS TRANSPORTATION DIVISION MAINTENANCE SHOP, 1820 E. 17TH ST., COLUMBUS, OH, 43219.

**ITEM 646 24" CROSSWALK LINE. WHITE. AS PER PLAN:**

IN ADDITION TO ITEM 646 CROSSWALK LINE, 24" WHITE CROSSWALK LONGITUDINAL LINES SHALL BE INSTALLED WITH NON SKID PREFORMED PLASTIC MATERIAL.

**ITEM 630 GROUND MOUNTED SUPPORT. NO. 3 POST. AS PER PLAN:**

IN ADDITION TO SPECIFICATION 630.06 AND 730.016, GROUND MOUNTED SUPPORTS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS: SUPPORTS SHALL BE SQUARE WITH DIE-CUT KNOCKOUTS FOR HOLES. HOLES SHALL NOT BE VISIBLE UNLESS THE KNOCKOUTS ARE REMOVED TO PROVIDE FOR THE MOUNTING OF A SIGN. THE PAINT SHALL BE FLAT BLACK THERMOSET POLYESTER POWDER COAT FINISH MEETING THE COLOR REQUIREMENTS SPECIFIED IN THE MATERIAL INFORMATION SUBMITTAL NOTE.

SQUARE POSTS SHALL BE ERECTED BY THE DRIVEN INSTALLATION METHOD. POST HOLES SHALL BE DRILLED OUT. POST SHALL BE DRIVEN IN AND EPOXIED INTO PLACE.

CALCULATED  
JMM  
CHECKED  
HLM

TRAFFIC CONTROL NOTES  
FIFTH AVE. BETWEEN OLENTANGY RIVER RD. AND PERRY ST.

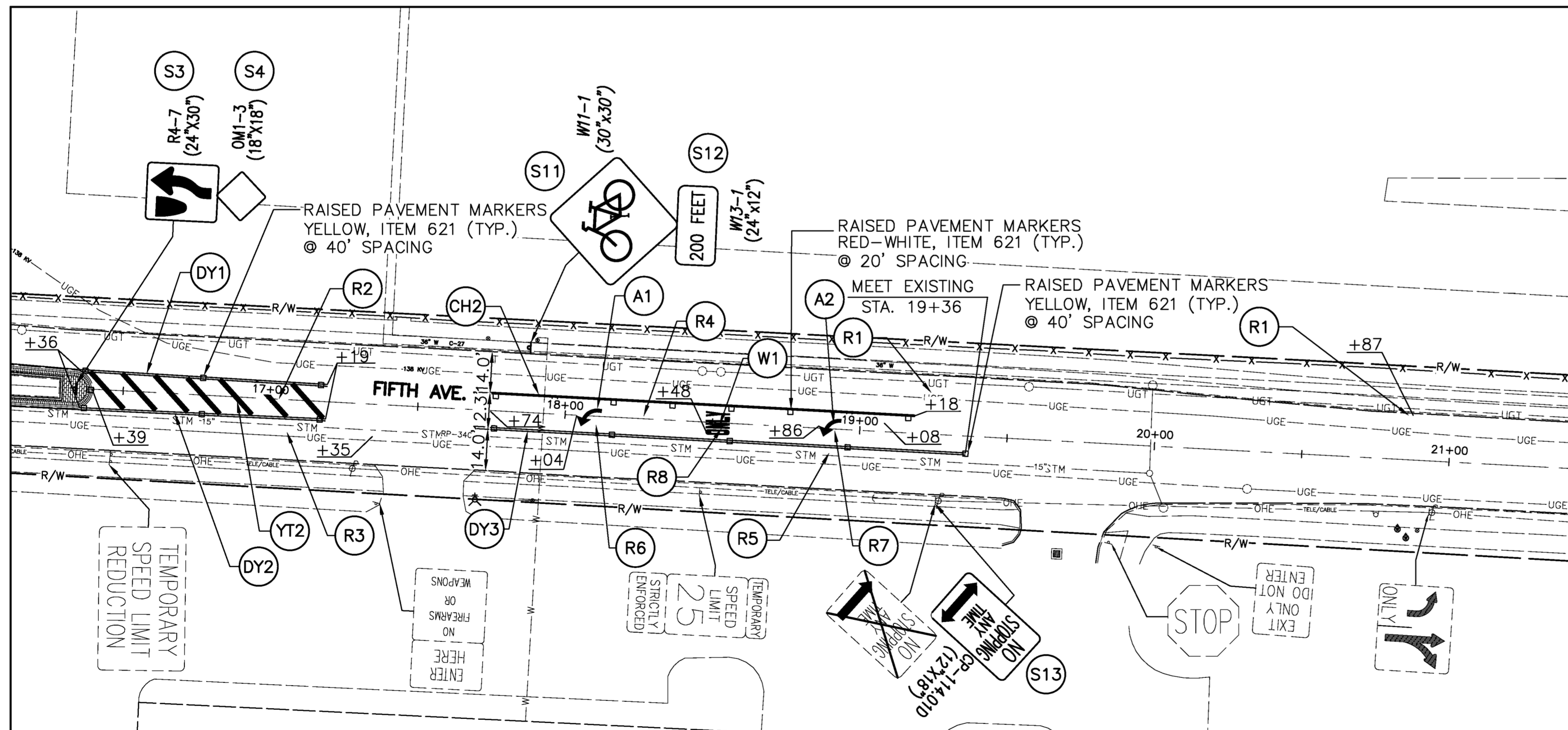
SSI OVERALL TRAFFIC MANAGEMENT PLAN  
CITY OF COLUMBUS

17  
22

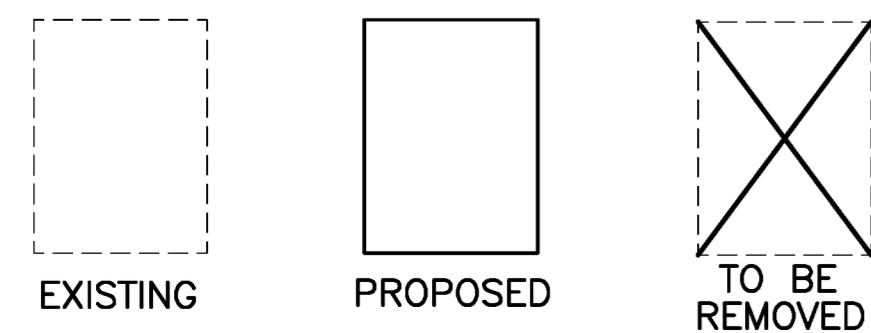
2321 E



Drawing: K:\210105\05\Fifth East of Olen tangy\210105\Fifth East of Olen tangy\210105\Fifth East of Olen tangy.dwg View: 12 Speed on: 06-15-07 10:02:22 Released by: jrm -L:User: 1.00 -Plot: scale 1=1 105/PS

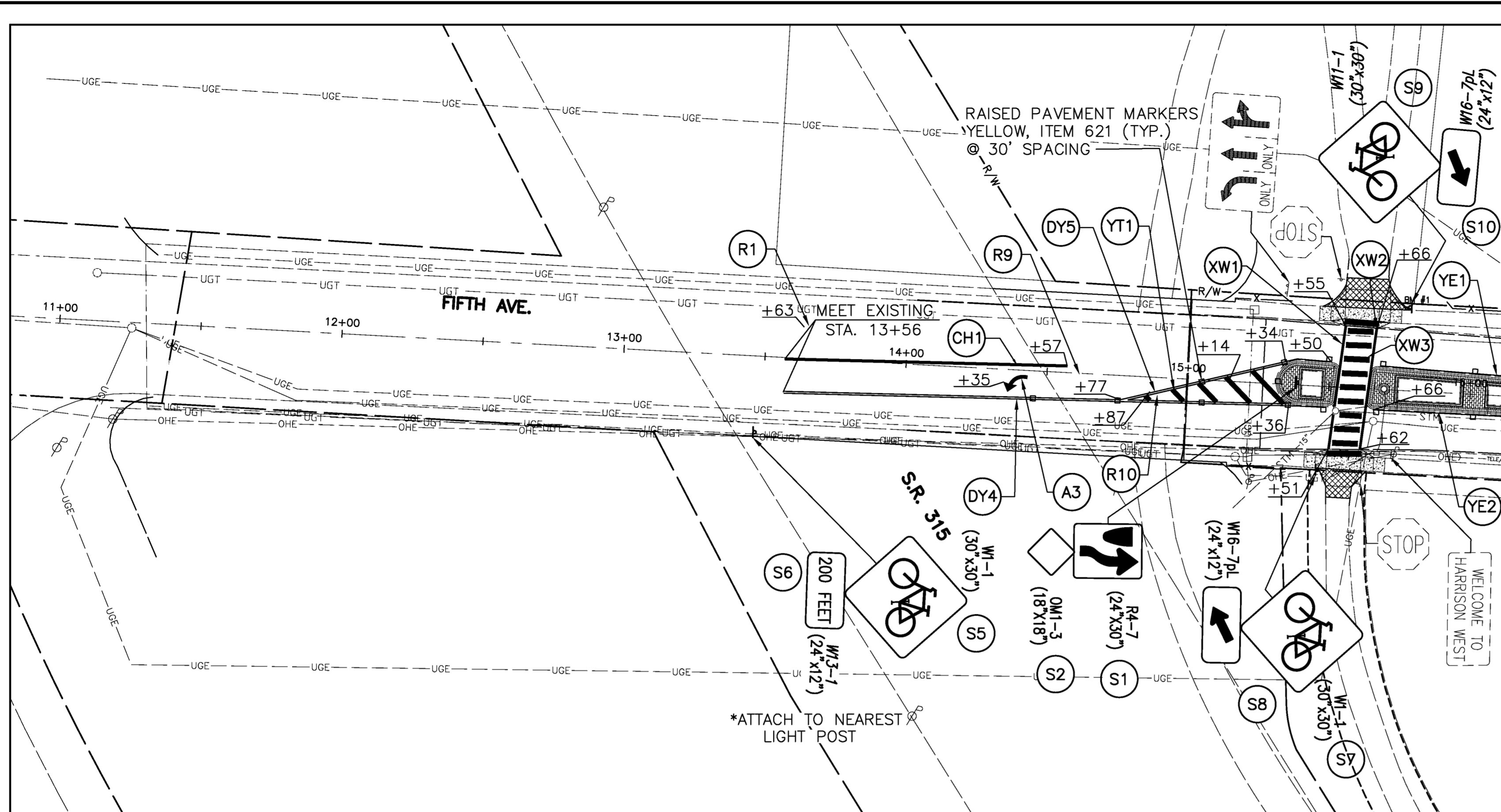


**SIGN LEGEND**



**LEGEND**

- (YE) EDGE LINE, YELLOW, 5"
- (WE) EDGE LINE, WHITE, 5"
- (DY) CENTER LINE, SOLID DOUBLE, 5"
- (S) PROPOSED SIGN
- (A) LANE ARROW
- (W) WORD ON PAVEMENT, 72" ONLY
- (XW) CROSSWALK LINE, 10"
- (YT) TRANSVERSE LINE, YELLOW, 20"
- (CH) CHANNELIZING LINE, 10"

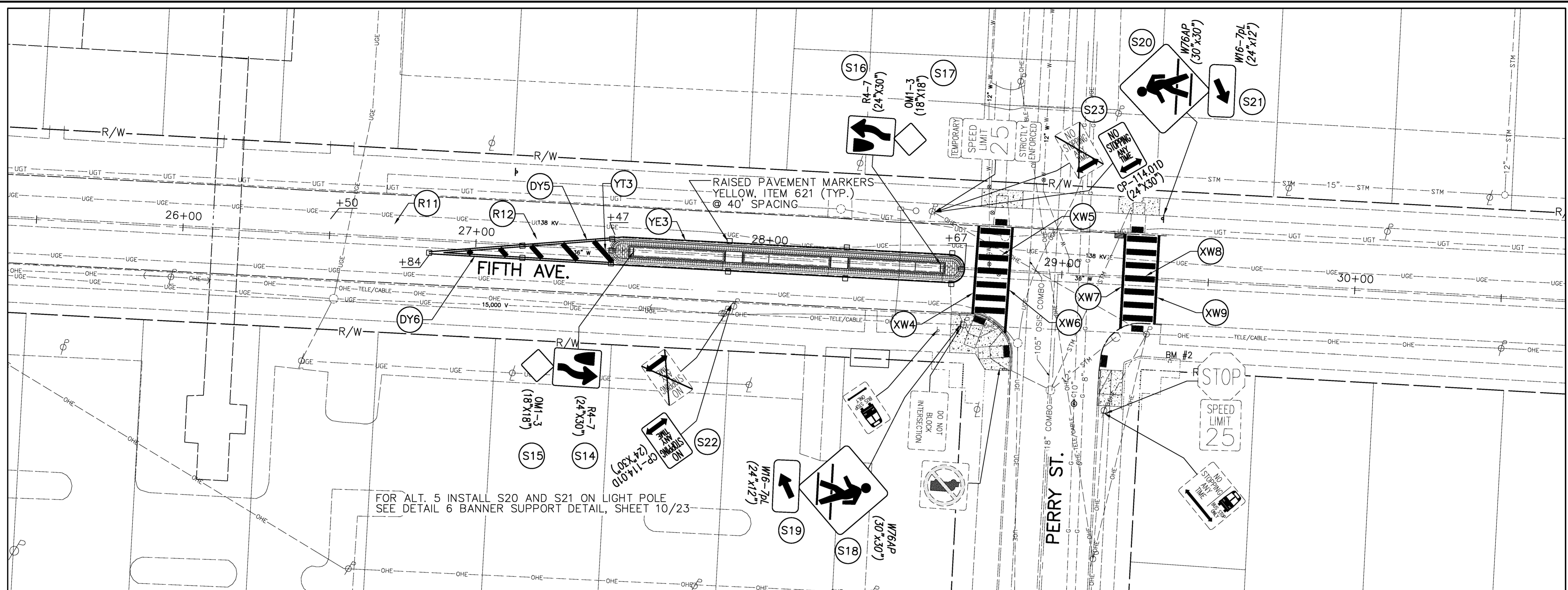


REFERENCE NUMBER	CODE	STATIONING				630			
		ON FIFTH AVE.	SIDE	SIZE	SQ FT	FT	EACH	EACH	
S1	R4-7	15+38	1' LT.	24"x30"	5.00	15.5			
S2	OM1-3	15+38	1' LT.	18"x18"	2.25				
S3	R4-7	16+33	ON CL.	24"x30"	5.00	15.5			
S4	OM1-3	16+33	ON CL.	18"x18"	2.25				
S5*	W11-1	13+47	27' RT.	30"x30"	6.25		1		
S6*	W3-1	13+47	27' RT.	24"x12"	2.00		1		
S7	W11-1	15+47	29' RT.	30"x30"	6.25	15.5			
S8	W16-7pL	15+47	29' RT.	24"x12"	2.00				
S9	W11-1	15+77	29' LT.	30"x30"	6.25	15.5			
S9	W16-7pL	15+77	29' LT.	24"x12"	2.00				
S11	W11-1	17+77	23' LT.	30"x30"	6.25	15.5			
S12	W16-7pL	17+77	23' LT.	24"x12"	2.00				
S13	CP-114.01D	17+77	23' LT.	12"x18"	1.5			1	
<b>TOTAL</b>					<b>49.0</b>	<b>77.5</b>	<b>2</b>	<b>1</b>	

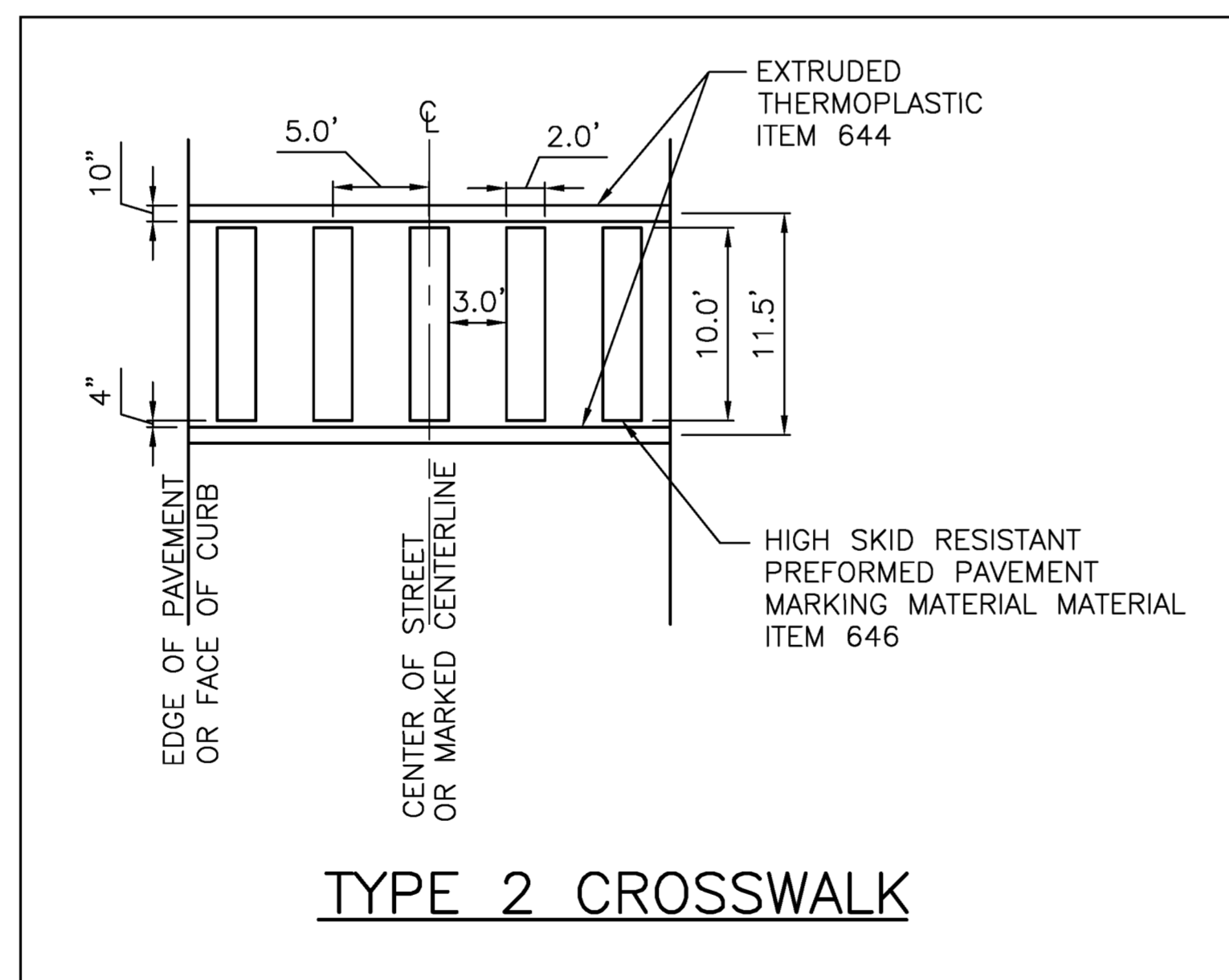
\* ATTACH TO NEAREST LIGHT POST 7' ABOVE SIDEWALK

REFERENCE NUMBER	STATIONING	SIDE	644										646	
			EA	EA	FT	MILE	EA	MILE	FT	FT	FT	FT		
R1	14+63 TO 20+87	LT.			280									
R2	16+39 TO 17+37	LT.			98									
R3	13+56 TO 17+37	RT.			381									
R4	17+74 TO 19+08	LT.			134									
R5	17+74 TO 19+36	RT.			162									
R6	18+04	RT.		1										
R7	18+86	RT.		1										
R8	18+48	RT.		1										
R9	13+56 TO 15+14	ON CL.			158									
R10	14+87	RT.		1										
DY1	16+36 TO 17+19	LT.						.016						
DY2	16+36 TO 17+19	RT.						.016						
DY3	17+74 TO 19+36	RT.						.031						
DY4	13+56 TO 15+36	RT.						.034						
DY5	14+77 TO 15+34	LT.						.011						
Y1	14+77 TO 15+36	LT.&RT.								46				
Y2	16+39 TO 17+32	LT.&RT.								115				
CH1	13+56 TO 14+57	LT.								101				
CH2	17+74 TO 19+18	LT.								144				
A1	18+04	ON C.L.	1											
A2	18+86	ON C.L.	1											
A3	14+35	RT.	1											
W1	18+48	ON C.L.						1						
XW1	15+51 TO 15+55	LT.&RT.										41		
XW2	15+52 TO 15+65	LT.&RT.											80	
XW3	15+62 TO 15+66	LT.&RT.										43		
YE1	15+34 TO 16+36	LT.					.016							
YE2	15+36 TO 16+36	RT.					.016							
<b>TOTAL</b>			<b>3</b>	<b>4</b>	<b>1213</b>	<b>.032</b>	<b>1</b>	<b>.108</b>	<b>245</b>	<b>161</b>	<b>84</b>	<b>80</b>		

Drawing: K:\210105\05\05\Fifth East of Olen tangy\210105\Final\Traffic Management Plan.dwg View: 11 Saved on: 07-03-08 09:03 \*Revised by: cdm -L:scale: 1:00 -Plot scale: 1=1/8"=1'

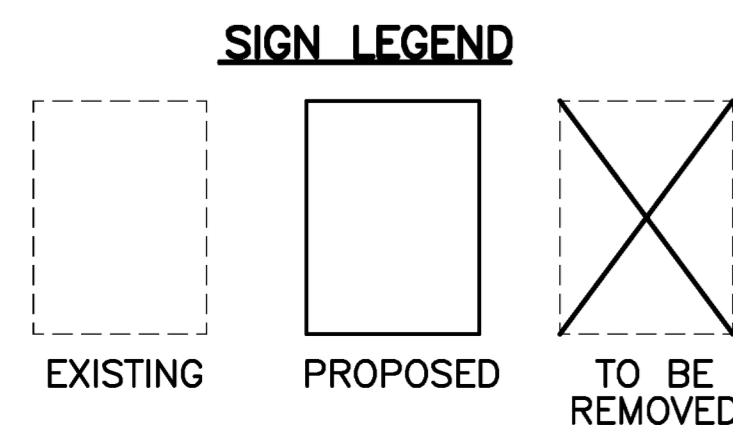


- LEGEND**
- (S) PROPOSED SIGN
  - (YE) EDGE LINE, YELLOW, 5"
  - (DY) CENTER LINE, SOLID DOUBLE, 5"
  - (XW) CROSSWALK LINE, 10"
  - (YT) TRANSVERSE LINE, YELLOW, 20"



REFERENCE NUMBER	CODE	STATIONING		SIDE	SIZE	630					
		ON FIFTH AVE.				SQ FT	FT	EACH	EACH		
S14	R4-7	27+44	ON CL.	24"x30"	5.0	15.5					
S15	OM1-3	27+44	ON CL.	18"x18"	2.25						
S16	R4-7	28+53	ON CL.	24"x30"	5.0	15.5					
S17	OM1-3	28+53	ON CL.	18"x18"	2.25						
S18	W76AP	28+67	19' RT.	30"x30"	6.25						
S19	W16-7pL	28+67	19' RT.	24"x12"	2.0			1			
S20	W76AP	29+34	20' LT.	30"x30"	6.25	15.5					
S21	W16-7pL	29+34	20' LT.	24"x12"	2.0						
S20	CP-114.01L	29+34	20' LT.	12"x18"	1.5				1		
S21	CP-114.01L	29+34	20' LT.	12"x18"	1.5				1		
TOTAL						34.0	46.5	2	2		

REFERENCE NUMBER	ON FIFTH AVE.	SIDE	STATIONING		644							646	
			REMOVAL - PAVEMENT MARKING	REMOVAL - PAVEMENT MARKING	EDGE LINE, 5" YELLOW	CENTER LINE, 5" DOUBLE YELLOW	TRANSVERSE LINE, 20", YELLOW	CROSSWALK LINE, 10" WHITE	CROSSWALK LINE, 24" WHITE	AS PER PLAN			
R11	26+50 TO 27+33												
R12	27+16		1	83									
DY6	26+84 TO 27+47	LT.&RT.			.012								
DY7	26+84 TO 27+47	RT.			.012								
XW4	28+71	LT.&RT.								30			
XW5	28+83	LT.&RT.								36			
XW6	28+72 TO 28+82	LT.&RT.									70		
XW7	29+21	LT.&RT.								32			
XW8	29+33	LT.&RT.								30			
XW9	29+22 TO 29+32	LT.&RT.									70		
YE3	27+47 TO 28+67	LT.			.046								
YT3	26+84 TO 27+47	LT.				.046	.024	28					
TOTAL			1	83	.046	.024	28	128	140				



**SSI OVERALL TRAFFIC MANAGEMENT PLAN**

**CITY OF COLUMBUS**

**TRAFFIC CONTROL**

**FIFTH AVE. BETWEEN OLENTANGY RIVER RD. AND PERRY ST.**

SCALE IN FEET

0 20 40

HORIZ. 1"=20'

19

22



Drawing: K:\210101\04\15th East of Olentangy\210101\15th East of Olentangy\210101\15th East of Olentangy.dwg View: V3 Saved on: 05-19-08 12:38 Plotted by: cdm -L:User: 1:00 -Plot: scale 1=1 1/8"=1"

**DIVISION OF ELECTRICITY**

THE DIVISION OF POWER AND WATER (POWER), CITY OF COLUMBUS, OHIO MAY HAVE HIGH VOLTAGE OVERHEAD PRIMARY AND SECONDARY CIRCUITS, AND/OR OVERHEAD STREET LIGHTING IN THE PROJECT AREA. THE CONTRACTOR IS HEREBY REQUIRED TO CONTACT THE DIVISION OF POWER AND WATER (POWER) BY FAX (614) 645-7150 FORTY EIGHT HOURS PRIOR TO CONDUCTING ANY ACTIVITY WITHIN THE CONSTRUCTION AREA. THE DIVISION OF POWER AND WATER (POWER) DISPATCH OFFICE NUMBER IS (614) 645-7627 (VOICE). ANY REQUIRED RELOCATION, SUPPORT, PROTECTIONS, OR RELATED ACTIVITY CONCERNED WITH THE CITY'S PRIMARY OR SECONDARY CIRCUITS IS TO BE PERFORMED BY THE DIVISION OF POWER AND WATER (POWER) AT THE EXPENSE OF THE PROJECT.

ANY REQUIRED RELOCATION, SUPPORT, PROTECTION, OR RELATED ACTIVITY CONCERNED WITH THE CITY'S STREET ELECTRICAL FACILITIES IS TO BE PERFORMED SOLELY BY THE CONTRACTOR UNDER THE DIRECTION OF DIVISION OF ELECTRICITY PERSONNEL AND AT THE EXPENSE OF THE PROJECT. THE CONTRACTOR SHALL USE MATERIAL AND MAKE REPAIRS TO A CITY OF COLUMBUS STREET LIGHTING SYSTEM ACCORDING TO THE DIVISION OF ELECTRICITY'S "MATERIAL AND INSTALLATION SPECIFICATIONS" (MIS) AND THE CITY OF COLUMBUS "CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS). ANY NEW OR RE-INSTALLED UNDERGROUND STREETLIGHT SYSTEM SHALL REQUIRE TESTING AS REFERRED TO IN SECTION 1000.18 OF THE CMS MANUAL. THE CONTRACTOR SHALL CONFORM TO THE DIVISION OF POWER AND WATER (POWER)'S POLICIES FOR CONDUCTOR SAFETY AND HOLD CAR SYSTEM ELECTRICITY (MIS-95), COPIES OF WHICH ARE AVAILABLE FROM THE DIVISION OF ELECTRICITY. ADDITIONAL QUESTIONS CAN BE ANSWERED BY CALLING MIHAI ORBECEA AT (614) 645-6851.

IF ANY ELECTRIC FACILITY BELONGING TO THE DIVISION OF ELECTRICITY IS DAMAGED IN ANY MANNER BY THE CONTRACTOR, THEIR AGENTS, SERVANTS OR EMPLOYEES, THAT REQUIRES EMERGENCY REPAIRS, THE DIVISION OF ELECTRICITY SHALL MAKE ALL NECESSARY REPAIRS AND THE EXPENSE OF SUCH REPAIRS AND OTHER RELATED COSTS SHALL BE PAID BY THE CONTRACTOR TO DIVISION OF POWER AND WATER (POWER), CITY OF COLUMBUS, OHIO.

**LIGHTING NOTES**

THE STREET LIGHTING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT CITY OF COLUMBUS "CONSTRUCTION AND MATERIAL SPECIFICATIONS", (LATEST EDITION, SECTION 1000, TITLED "STREET LIGHTING"), INCLUDING ALL SUPPLEMENTS THERETO, IN FORCE ON THE DATE OF THE CONTRACT. SHALL GOVERN ALL MATERIALS AND WORKMANSHIP INVOLVED IN THE IMPROVEMENTS SHOWN ON THESE PLANS, EXCEPT AS SUCH SPECIFICATIONS ARE MODIFIED BY THE FOLLOWING OR BY THE SPECIFICATIONS DETAILS SET FORTH HEREIN.

THE PLAN DETAILS SHALL BE CONSIDERED SUPPLEMENTAL TO MIS SPECIFICATIONS.

WHERE EXCAVATIONS OCCUR ALONGSIDE OF CURBS OR SIDEWALKS, THE CONTRACTOR SHALL SHORE, BRACE OR SUPPORT PIECES IN PLACE SO THAT THEY WILL NOT BECOME DISLODGED OR DAMAGED. ANY DAMAGED CURB OR SIDEWALK SHALL BE REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE.

PAVEMENTS DAMAGED DUE TO CONTRACTORS NEGLIGENCE SHALL BE REPLACED AT CONTRACTORS EXPENSE. REPAIRS SHALL BE MADE IN ACCORDANCE TO CITY ENGINEER DRAWING #1441 DR. A.

NO SPLICES SHALL BE MADE IN CIRCUIT CABLES, EXCEPT AT NOTED LOCATIONS. SPLICES SHALL BE MADE IN PULL BOX ENCLOSURES AND POLES ONLY. THE FINAL SPLICE TO DOE CIRCUIT #10 SHALL BE MADE BY D.O.E. CREW.

ALL CONDUIT IN OPEN AREAS SHALL RECEIVE CONCRETE ENCASEMENT IN ACCORDANCE WITH MIS #15.

CONDUIT INSTALLED UNDER DRIVEWAYS SHALL BE PUSHED FROM A MINIMUM DISTANCE OF ONE (1') FOOT BEYOND PAVEMENT EDGES.

CONDUIT IN OPEN AREAS SHALL BE CONSTRUCTED PER MIS #15 (2" CONDUIT UNDER BRICK AREAS) AND SHALL BE PAID PER MIS #89.

PULL BOXES SHALL BE LOCATED APPROXIMATELY WHERE SHOWN ON PLANS WITH EXACT LOCATIONS TO BE DETERMINED IN THE FIELD AFTER CONSIDERATION IS GIVEN TO THE LOCATION OF UTILITIES, PAVEMENTS AND GRADES.

CONTRACTOR MAY REMOVE SIDEWALK FROM ONE SIDE OF THE STREET FOR THE PUSH PITS WHERE CONDUIT CROSSES STREET. COST FOR SIDEWALK REMOVAL AND REPLACEMENT SHALL BE INCLUDED IN THE VARIOUS UNIT BID PRICE.

ALL TRENCHES WITHIN THE ROAD RIGHT-OF-WAY SHALL BE BACKFILLED OR SECURELY PLATED DURING NON-WORKING HOURS.

AS BUILT RECORD - THE CONTRACTOR SHALL MAINTAIN A SET OF PROJECT DOCUMENTS. THESE DOCUMENTS SHALL INCLUDE REVIEWED SHOP DRAWINGS, CHANGE ORDERS, EQUIPMENT OPERATING INSTRUCTIONS, FIELD TEST RECORDS, AND AS BUILT DRAWINGS. THE AS BUILT DRAWING SHALL BE MARKED LEGIBLY IN RED, THE ACTUAL LOCATION OF EQUIPMENT AND CONDUITS AS CONSTRUCTED. ALL EQUIPMENT AND UNDERGROUND CONDUITS INSTALLED SHALL HAVE LOCATIONS MARKED IN DISTANCES OFF A LANDMARK AT LEAST EVERY 25 FEET AND AS NECESSARY AT BENDS FOR LOCATION AT A LATER DATE.

SHOP DRAWINGS - THE CONTRACTOR SHALL SUMMIT SHOP DRAWINGS FOR EACH MATERIAL ITEM TO BE INCORPORATED INTO THE PROJECT.

SIGN LUMINAIRE SHALL BE INSTALLED 1' IN FRONT OF THE SIGNS. THE SIGN LUMINAIRES ARE DESIGNED TO ILLUMINATE A SIGN 4' WIDE, 2' HIGH, MOUNTED 6" ABOVE GRADE. THE CONTRACTOR SHALL VERIFY THE SIGN SIZE PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OFF ANY DIMENSIONAL CHANGES OF THE SIGN SIZE. SIGN LUMINAIRE SHALL BE SPACED IN 1/3 DIMENSIONAL INCREMENTS ACROSS THE SIGNS WIDTH (APPROX. 1'4").

LEAVE 5' OF SLACK CABLE IN EACH PULL BOX.

THE 3/4" CONDUIT SHALL MEET ALL THE REQUIREMENTS OF MIS #89 EXCEPT SIZE.

THIS CONDUIT INVOLVES WORK ON AND NEAR DIVISION OF ELECTRICITY'S ELECTRICAL FACILITIES. THE DIVISION OF ELECTRICITY HAS A CONDUCTOR SAFETY POLICY WHICH SHALL BE FOLLOWED BY ALL PERSONS WORKING ON OR NEAR THESE FACILITIES. NO WORK WILL BE PERMITTED TO START UNTIL EACH PERSON WORKING ON OR AROUND THE DIVISION OF ELECTRICITY'S CONDUCTORS HAS READ AND UNDERSTANDS THE POLICY. COPIES OF THE CONDUCTOR SAFETY POLICY CAN BE OBTAINED THROUGHOUT THE DIVISION OF ELECTRICITY, 910 DUBLIN ROAD, 4TH FLOOR.

ALL ITEMS OF WORK CALLED FOR ON THE PLANS, FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED, SHALL BE PERFORMED BY THE CONTRACTOR AND THE COST OF THESE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE VARIOUS RELATED ITEMS. THIS INCLUDES, BUT NOT LIMITED TO SUCH INCIDENTAL ITEMS, AS RELOCATION OF MAIL BOXES, SAW CUTTING, AND REMOVAL AND/OR RELOCATION OF SIGNS, RAILROAD TIES, SPRINKLERS, RELOCATING ROOF OR SUMP PUMP DRAINS AROUND LIGHT POLE FOUNDATIONS, HAND DIGGING AROUND UNDERGROUND UTILITIES OR OTHER MISCELLANEOUS ITEMS.

ALL CONDUIT SHALL BE INSTALLED IN CONTINUOUS LENGTHS. TERMINATION'S OF CONDUIT SHALL OCCUR ONLY WITHIN PULL BOXES AND WITHIN THE HAND HOLE OF LIGHT POLES. IF THE CONDUIT CONSIST OF CABLE-IN-DUCT, IT SHALL BE INSTALLED INTO THE FOUNDATION ELLS WITHOUT KINKING OR SPLICING.

NO EXCAVATIONS SHALL BE MADE WITHIN FIVE (5') FEET OF ANY POLE THAT SUPPORTS TRAFFIC SIGNAL DISPLAYS OR SIGNS BY MAST ARM OR SIGNAL SPAN. EXCAVATION WITH EIGHT (8') FEET BUT MORE THAN FIVE (5') FEET SHALL REQUIRE ADDITIONAL SUPPORT (DOWN GUY, HEAD GUY, BASE GUY, ETC.). THE CONTRACTOR SHALL CONTACT THE DIVISION SYSTEM ENGINEER (645-7790) AT LEAST TWO WORKING DAYS PRIOR TO SUCH EXCAVATIONS, SO THAT THE DIVISION MAY INSTALL SUCH SUPPORTS AT THE OWNER/CONTRACTING AGENCY'S EXPENSE.

MAINTAIN A MINIMUM OF 3' HORIZONTAL AND 1' VERTICAL CLEARANCE FROM ALL WATER AND SEWER LINES, UNLESS APPROVED BY ENGINEER.

CONDUCTORS ON THE PRIMARY SIDE OF THE TRANSFORMER SHALL BE #4 AWG FROM THE POWER SOURCE TO THE TRANSFORMER. FROM THE TRANSFORMER (SECONDARY) TO THE LANDSCAPE LUMINAIRES CONDUCTORS SHALL BE #10 AWG, COPPER, SINGLE CONDUCTOR, TYPE USE OR RHW OR RHH. #10 CONDUCTORS SHALL MEET THE REQUIREMENTS OF MIS SPECIFICATION #14 EXCEPT FOR SIZE AND INSULATION TYPE. CONTRACTOR SHALL ASCERTAIN THE LINE VOLTAGE AT THE POWER PANEL OF THE MELP CIRCUIT AND CONNECT TO THE TRANSFORMER TAP LEADS WHICH OPTIMIZE THE OUTPUT VOLTAGE WITH LOAD CONNECTED TO THE DESIRED 120 VOLTS.

FUSE DISCONNECT ENCLOSURE AND ELECTRICAL APPARATUS. THE CONTRACTOR SHALL PROVIDE AND INSTALL THE ENCLOSURE WHICH SHALL CONTAIN THE 30 AMP FUSE SWITCH, AND TRANSFORMER. THE TRANSFORMER SHALL BE INSTALLED IN THE FUTURE AND THUS NOT INCLUDED IN THIS CONTRACT. HOWEVER THE ENCLOSURE SHALL BE PROVIDED WITH PANEL SIZED AND READY TO ACCEPT THE FUTURE TRANSFORMER. ALL FUSE BLOCKS SHALL BE INSTALLED WITHOUT FUSES.

THE ENCLOSURE FOR THE POWER PANEL SHALL BE NEMA 4X, STAINLESS STEEL WITH FUSED DISCONNECT 60 AMP RATING, 3 POLE. THE ENCLOSURE SHALL BE APPROXIMATELY 24"x21"x9" AND PROVIDED WITH GROUNDING LUG, DOOR AND KEY LOCK. ENCLOSURE TO BE SIMILAR TO WEIGMANN AND COMPANY INC. MODEL SSN4X-24228.

INCLUDE THE COST OF COMPLETE INSTALLATION IN THE PRICE BID FOR EACH LUMINAIRE.

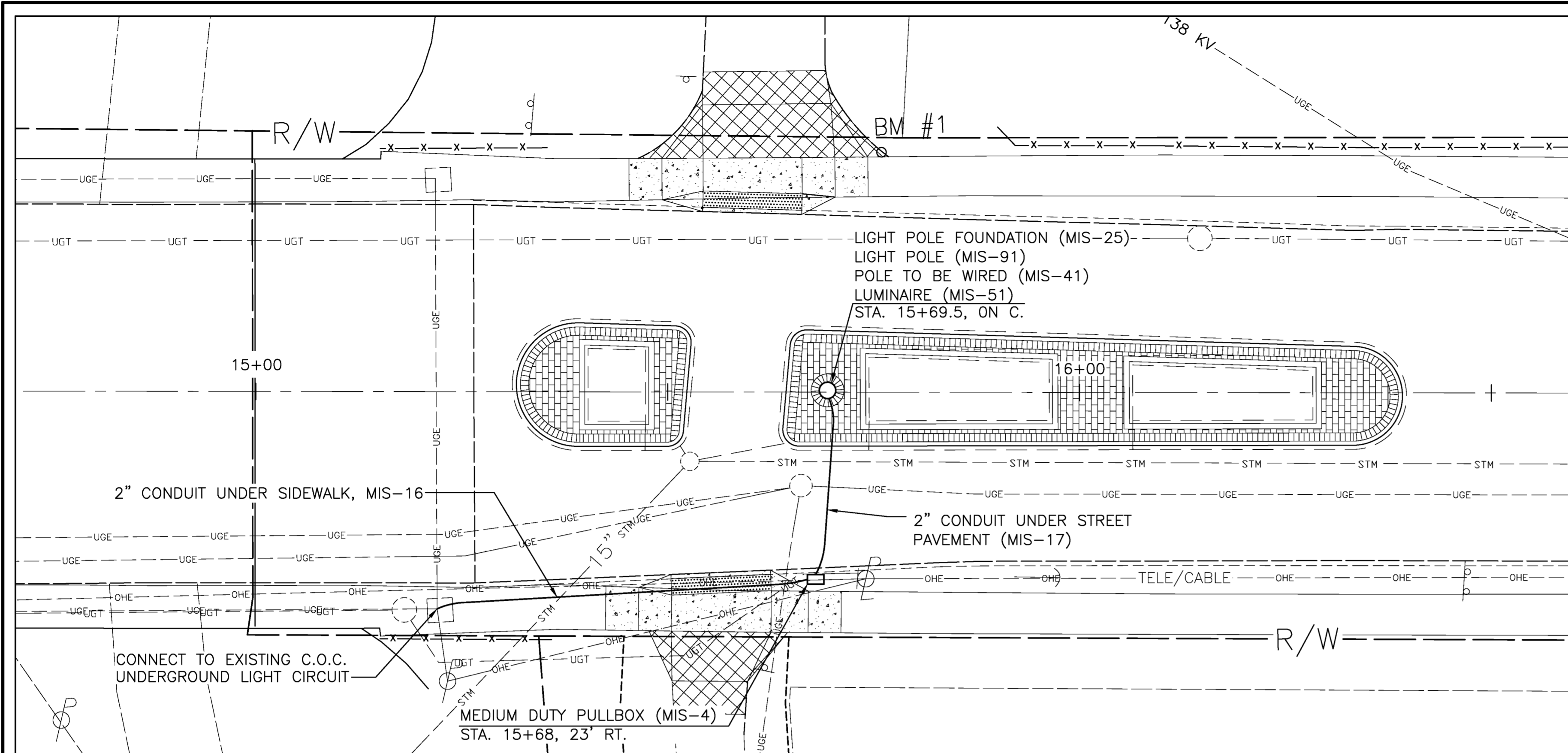
THE FUSED DISCONNECT SWITCH WITH 480 TO 120/240 VOLT TRANSFORMER SHALL BE PAID AS A COMPLETE UNIT, INSTALLED IN PLACE, EACH. INCLUDE IN COST THE SWITCHES, FUSES, TRANSFORMER, POLES, CONDUITS TO THE PULL BOX, WIRING, MOUNTING ANGLES, ENCLOSURE, COORDINATION WITH MELP IN MAKING THE CONNECTION TO THE EXISTING STREET LIGHTING CIRCUIT, AND ALL OTHER ELECTRICAL EQUIPMENT REQUIRED TO PROVIDE A COMPLETE AND OPERABLE UNIT AS INTENDED BY THE PROJECT PLANS.

ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE LATEST EDITION OF THE "NATIONAL ELECTRICAL CODE".

CALCULATED  
JNM  
CHECKED  
HLM

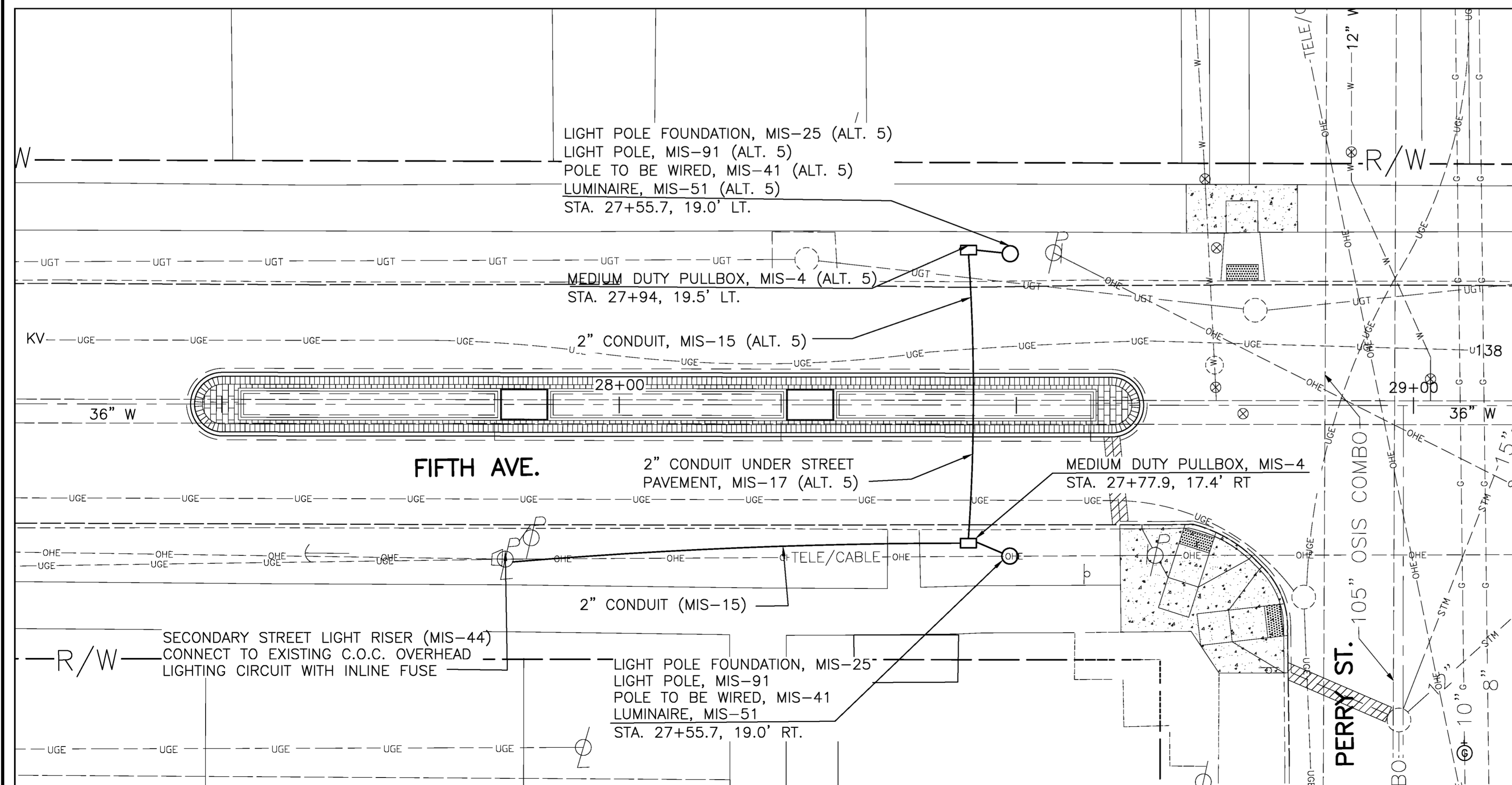
LIGHTING NOTES  
FIFTH AVE. BETWEEN OLENTANGY RIVER RD. AND PERRY ST.

SSI OVERALL TRAFFIC MANAGEMENT PLAN  
CITY OF COLUMBUS



**5TH AVE. NEAR 315**

SCALE: 1"=10'

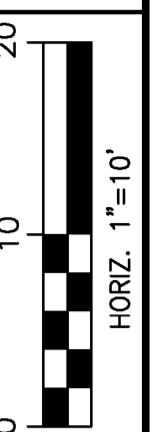
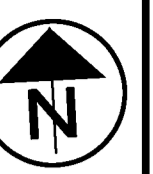


**5TH AVE. NEAR PERRY ST.**

SCALE: 1"=10'

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	TOTAL
1000	STREET LIGHT CIRCUIT, 2-#4-5KV CABLES (MIS-14)	LF	172
1000	2" CONDUIT IN OPEN AREAS (MIS-15)	LF	60
1000	2" CONDUIT UNDER SIDEWALK (MIS-16)	LF	46
1000	2" CONDUIT UNDER PAVEMENT (MIS-17)	LF	23
1000	480V STREET LIGHT CIRCUIT RISER (MIS-44)	EACH	1
1000	LAMP POST FOUNDATION (MIS-25)	EACH	2
1000	FIBERGLASS DECORATIVE LAMP POST (MIS-91)	EACH	2
1000	POST TOP LUMINAIRE, 100W, 480V ACORN TYPE (MIS-51)	EACH	2
1000	POLE (13' MH) TO ABE WIRED, ANCHOR BASE (MIS-41)	EACH	2
1000	PULL BOX, MEDIUM DUTY, 13"x24" (MIS-4)	EACH	2
<b>ALTERNATE 5-ADDITIONAL LIGHTING AT 5TH AVE NEAR PERRY ST</b>			
1000	STREET LIGHT CIRCUIT, 2-#4-5KV CABLES (MIS-14)	LF	44
1000	2" CONDUIT IN OPEN AREAS (MIS-15)	LF	4
1000	2" CONDUIT UNDER PAVEMENT (MIS-17)	LF	36
1000	LAMP POST FOUNDATION (MIS-25)	EACH	1
1000	FIBERGLASS DECORATIVE LAMP POST (MIS-91)	EACH	1
1000	POST TOP LUMINAIRE, 100W, 480V ACORN TYPE (MIS-51)	EACH	1
1000	POLE (13' MH) TO BE WIRED, ANCHOR BASE (MIS-41)	EACH	1
1000	PULL BOX, MEDIUM DUTY, 13"x24" (MIS-4)	EACH	1
<b>ALTERNATE 6-LANDSCAPE AT 5TH AVE NEAR 315</b>			
1000	1 1/2" CABLE-IN-DUCT, TRENCHLESS INSTALLATION, (MIS-124)	L.F.	50

Drawing: K:\210105\0515th East of Olentangy\210105\0515th East of Olentangy.dwg Saved on: 07-03-08 09:04 Revised by: cdm - L:\scale: 1:10 - Plot scale: 1"=10' P/S



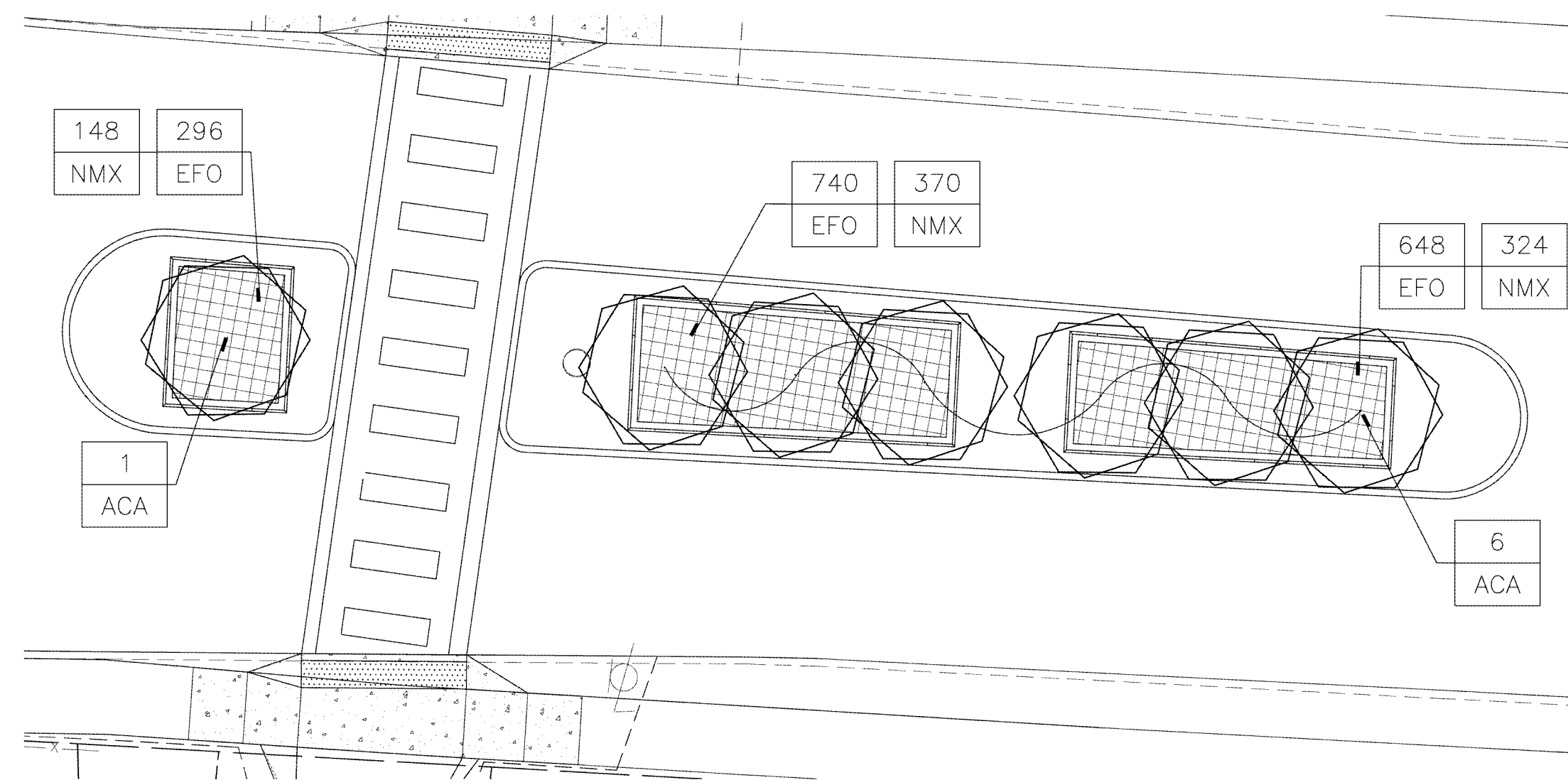
CALCULATED  
WRH  
CHECKED  
JMM

**LIGHTING PLAN**  
FIFTH AVE. BETWEEN OLENTANGY RIVER RD. AND PERRY ST.

**SSI OVERALL TRAFFIC MANAGEMENT PLAN**  
CITY OF COLUMBUS

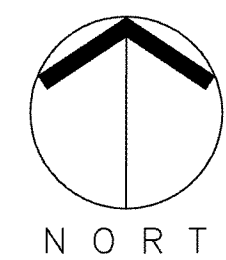
21  
22





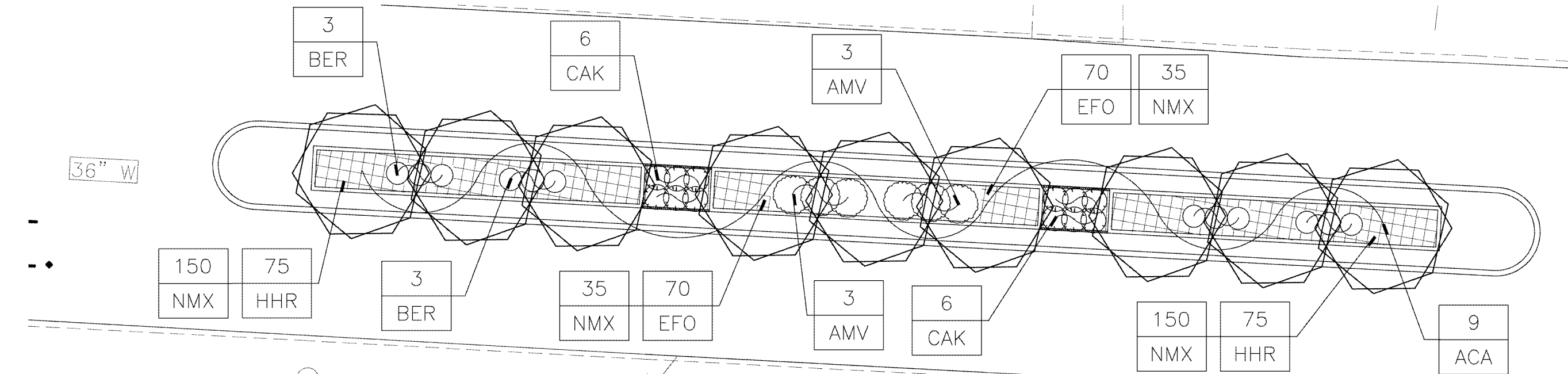
5TH AVE NEAR 315

SCALE: 1"= 10'



PLANT LIST

SYMBOL	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	CONDITION
ACA	AMELANCHIER x G. 'CUMULUS'	CUMULUS SERVICEBERRY	AS SHOWN	1-1/2" CAL.	B & B
AMV	ARONIA MELANOCARPA 'VIKING'	VICKING BLACK CHOKEBERRY	AS SHOWN	5 GAL.	B & B
BER	BERBERIS T. A. 'NANA'	CRIMSON PYGMY BARBERRY	AS SHOWN	3 GAL.	CONT.
EFO	EUONYMUS FORTUNEI 'COLORATUS'	WINTERCREEPER	6" O.C.	1 GAL.	CONT.
HHR	HEMEROCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	12" O.C.	1 GAL.	CONT.
CAK	CALMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER REED GRASS	AS SHOWN	2 GAL.	CONT.
NMX	NARCISSUS X MIX	50/50 MIX OF DUTCH MASTER AND ICE FOLLIES DAFFODILS	8" O.C.	--	BULB



FIFTH AVE NEAR PERRY

SCALE: 1"= 10'



PLANTING AND PLANTING SPECIFICATIONS  
FIFTH AVE. EAST OF OLENTANGY RIVER RD.

SSI OVERALL TRAFFIC MANAGEMENT PLAN  
CITY OF COLUMBUS

SECTION 02930 - EXTERIOR PLANTS

PART 1 - GENERAL

1.1 SUMMARY

A. THIS SECTION INCLUDES THE FOLLOWING:

- TREES, SHRUBS, GROUND COVER AND PLANTS.
- PLANTING MIXES, MULCHES AND ACCESSORIES.
- MAINTENANCE.
- PLANTING INSTALLATION RECORD DRAWINGS.

2 DEFINITIONS

L0.48;A. FINISH GRADE: ELEVATION OF FINISHED SURFACE OF PLANTING SOIL.

B. MANUFACTURED TOPSOIL: SOIL PRODUCED OFF-SITE BY HOMOGENEOUSLY BLENDING MINERAL SOILS OR SAND WITH STABILIZED ORGANIC SOIL AMENDMENTS TO PRODUCE TOPSOIL OR PLANTING SOIL.

C. PLANTING SOIL: NATIVE OR IMPORTED TOPSOIL, MANUFACTURED TOPSOIL, OR SURFACE SOIL MODIFIED TO BECOME TOPSOIL; MIXED WITH SOIL AMENDMENTS.

D. SUBGRADE: SURFACE OR ELEVATION OF SUBSOIL REMAINING AFTER COMPLETING EXCAVATION, OR TOP SURFACE OF A FILL OR BACKFILL, BEFORE PLACING PLANTING SOIL.

3 SUBMITTALS

- PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.
- SAMPLES: MINERAL MULCH.
- PRODUCT CERTIFICATES.
- PLANTING SCHEDULE: NOTIFY THE ARCHITECT IN WRITING AT LEAST ONE WEEK PRIOR TO START OF ANTICIPATED PLANTING DATES.
- MAINTENANCE INSTRUCTIONS: TEN (10) DAYS PRIOR TO END OF CONTRACTUAL MAINTENANCE PERIOD, SUBMIT COMPLETE MAINTENANCE PROCEDURES, FOR THE OWNER'S USE, RECOMMENDING PROPER DEVELOPMENT, WATERING, WEEDING, CULTIVATING, MULCHING, FERTILIZING, SPRAYING, AND PRUNING OF PLANTS DURING A CALENDAR YEAR.
- PROVIDE PLANTING INSTALLATION RECORD DRAWINGS.

- LEGIBLY MARK DRAWINGS TO RECORD ACTUAL MATERIAL INSTALLATION.
- INDICATE LOCATIONS, REFERENCED TO PERMANENT SURFACE IMPROVEMENTS.
- IDENTIFY FIELD CHANGES OF MATERIALS, QUANTITIES, AND CHANGES MADE BY SUBSTITUTION OR CHANGE ORDER.
- SUBMIT THREE (3) COPIES TO ARCHITECT FOR REVIEW AND APPROVAL.

2.2 PLANTING MATERIALS

A. TOPSOIL: ASTM D 5268, PH RANGE OF 5.5 TO 7, A MINIMUM OF 4 PERCENT ORGANIC MATERIAL CONTENT; FREE OF STONES 1" OR LARGER IN ANY DIMENSION AND OTHER EXTRANEIOUS MATERIALS HARMFUL TO PLANT GROWTH.

- TOPSOIL SOURCE: REUSE SURFACE SOIL STOCKPILED ON-SITE AND SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF-SITE SOURCES WHEN QUANTITIES ARE INSUFFICIENT. VERIFY SUITABILITY OF STOCKPILED SURFACE SOIL TO PRODUCE TOPSOIL.
- TOPSOIL SOURCE: AMEND EXISTING IN-PLACE SURFACE SOIL TO PRODUCE TOPSOIL. VERIFY SUITABILITY OF SURFACE SOIL TO PRODUCE TOPSOIL. SURFACE SOIL MAY BE SUPPLEMENTED WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF-SITE SOURCES.

B. INORGANIC SOIL AMENDMENTS:

- LIME: ASTM C 602, CLASS T OR O, AGRICULTURAL LIMESTONE CONTAINING A MINIMUM 80 PERCENT CALCIUM CARBONATE EQUIVALENT.
- SULFUR: GRANULAR, BIODEGRADABLE, CONTAINING A MINIMUM OF 90 PERCENT SULFUR, WITH A MINIMUM 99 PERCENT PASSING THROUGH NO. 6 SIEVE AND A MAXIMUM 10 PERCENT PASSING THROUGH NO. 40 SIEVE.
- IRON SULFATE: GRANULATED FERROUS SULFATE CONTAINING A MINIMUM OF 20 PERCENT IRON AND 10 PERCENT SULFUR.
- ALUMINUM SULFATE: COMMERCIAL GRADE, UNADULTERATED.

C. ORGANIC SOIL AMENDMENTS:

- COMPOST: WELL-COMPOSTED, STABLE, AND WEED-FREE ORGANIC MATTER, PH RANGE OF 5.5 TO 8; MOISTURE CONTENT 35 TO 55 PERCENT BY WEIGHT; 100 PERCENT PASSING THROUGH 1" SIEVE.
- PEAT: SPHAGNUM PEAT MOSS, PARTIALLY DECOMPOSED, FINELY DIVIDED OR GRANULAR TEXTURE, WITH A PH RANGE OF 3.4 TO 4.8.
- PEAT: FINELY DIVIDED OR GRANULAR TEXTURE, WITH A PH RANGE OF 6 TO 7.5, CONTAINING PARTIALLY DECOMPOSED MOSS PEAT, NATIVE PEAT, OR REED-SEDGE PEAT AND HAVING A WATER-ABSORBING CAPACITY OF 1100 TO 2000 PERCENT.
- WOOD DERIVATIVES: DECOMPOSED, NITROGEN-TREATED SAWDUST, GROUND BARK, OR WOOD WASTE; OF UNIFORM TEXTURE, FREE OF CHIPS, STONES, STICKS, SOIL, OR TOXIC MATERIALS.

D. FERTILIZER:

- BONEMEAL: COMMERCIAL, RAW OR STEAMED, FINELY GROUND; A MINIMUM OF 4 PERCENT NITROGEN AND 10 PERCENT PHOSPHORIC ACID.
- SUPERPHOSPHATE: COMMERCIAL, PHOSPHATE MIXTURE, SOLUBLE; A MINIMUM OF 20 PERCENT AVAILABLE PHOSPHORIC ACID.
- COMMERCIAL FERTILIZER: COMMERCIAL-GRADE COMPLETE FERTILIZER OF NEUTRAL CHARACTER, CONSISTING OF FAST- AND SLOW-RELEASE NITROGEN, 50 PERCENT DERIVED FROM NATURAL ORGANIC SOURCES OF UREA FORMALDEHYDE, PHOSPHOROUS, AND POTASSIUM.
- SLOW-RELEASE FERTILIZER: GRANULAR OR PELLETTED FERTILIZER CONSISTING OF 50 PERCENT WATER-INSOLUBLE NITROGEN, PHOSPHORUS, AND POTASSIUM.

E. MULCHES: SHREDDED HARDWOOD.

2.3 ACCESSORIES

- STAKES FOR SUPPORTING TREES: HARDWOOD POSTS 2" X 2" X 8'-0" IN LENGTH.
- STAKES FOR GUYING: HARDWOOD POSTS 2" X 2" X 3'-0" IN LENGTH.
- STAKING AND GUYING WIRE: NO. 10 OR 12 GAUGE GALVANIZED WIRE.

- STAKING AND GUYING HOSE: TWO PLY REINFORCED GARDEN HOSE, NOT LESS THAN 1/2" IN DIAMETER.
- WEED-CONTROL BARRIERS:

- NONWOVEN FABRIC: POLYPROPYLENE OR POLYESTER FABRIC, 3 OZ./SQ. YD. MINIMUM.
- COMPOSITE FABRIC: WOVEN, NEEDLE-PUNCHED POLYPROPYLENE SUBSTRATE BONDED TO A NONWOVEN POLYPROPYLENE FABRIC, 4.8 OZ./SQ. YD.

PART 3 - EXECUTION

3.1 EXTERIOR PLANTING

A. BED ESTABLISHMENT:

- LOOSEN SUBGRADE OF PLANTING BEDS TO A MINIMUM DEPTH OF 6".
- REMOVE STONES LARGER THAN 1" IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEIOUS MATTER AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
- THOROUGHLY BLEND PLANTING SOIL MIX OFF-SITE BEFORE SPREADING OR SPREAD TOPSOIL, APPLY SOIL AMENDMENTS AND FERTILIZER ON SURFACE, AND THOROUGHLY BLEND PLANTING SOIL MIX.
- SPREAD PLANTING SOIL MIX TO A DEPTH OF 6" BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLEMENT. DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
- FINISH GRADING: GRADE PLANTING BEDS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES.

B. TREES AND SHRUBS:

- PITS AND TRENCHES: EXCAVATE CIRCULAR PITS WITH SIDES SLOPED INWARD. TRIM BASE LEAVING CENTER AREA RAISED SLIGHTLY TO SUPPORT ROOT BALL AND ASSIST IN DRAINAGE. DO NOT FURTHER DISTURB BASE. SCARIFY SIDES OF PLANT PIT SMEARED OR SMOOTHED DURING EXCAVATION. EXCAVATE APPROXIMATELY THREE TIMES AS WIDE AS BALL DIAMETER.
- SET TREES AND SHRUBS PLUMB AND IN CENTER OF PIT OR TRENCH WITH TOP OF ROOT BALL 1" ABOVE ADJACENT FINISH GRADES.

- BALLED AND BURLAPPED: REMOVE BURLAP AND WIRE BASKETS FROM TOPS OF ROOT BALLS AND PARTIALLY FROM SIDES, BUT DO NOT REMOVE FROM UNDER ROOT BALLS. REMOVE PALLETS, IF ANY, BEFORE SETTING. DO NOT USE PLANTING STOCK IF ROOT BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION.
- BALLED AND POTTED OR CONTAINER GROWN: CAREFULLY REMOVE ROOT BALL FROM CONTAINER WITHOUT DAMAGING ROOT BALL OR PLANT.
- FABRIC BAG GROWN: CAREFULLY REMOVE ROOT BALL FROM FABRIC BAG WITHOUT DAMAGING ROOT BALL OR PLANT. DO NOT USE PLANTING STOCK IF ROOT BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION.
- PLACE PLANTING SOIL MIX AROUND ROOT BALL IN LAYERS, TAMPING TO SETTLE MIX AND ELIMINATE VOIDS AND AIR POCKETS. WHEN PIT IS APPROXIMATELY ONE-HALF BACKFILLED, WATER THOROUGHLY BEFORE PLACING REMAINDER OF BACKFILL. REPEAT WATERING UNTIL NO MORE WATER IS ABSORBED. WATER AGAIN AFTER PLACING AND TAMPING FINAL LAYER OF PLANTING SOIL MIX.

- ORGANIC MULCHING: APPLY 3" AVERAGE THICKNESS OF ORGANIC MULCH EXTENDING 12" BEYOND EDGE OF PLANTING PIT OR TRENCH. DO NOT PLACE MULCH WITHIN 3" OF TRUNKS OR STEMS.

C. TREE GUYING AND STAKING

- TREES ARE NOT TO BE WRAPPED WITH TREE WRAP UNLESS SPECIFICALLY DIRECTED BY THE ARCHITECT.
- STAKE AND GUY TREES AFTER LAWN SEEDING OR SODDING OPERATIONS ARE COMPLETE, AND WHEN HIGH WINDS OR OTHER CONDITIONS WHICH MAY AFFECT TREE SURVIVAL OR APPEARANCE OCCUR.
- DECIDUOUS TREES: STAKE TREES UNDER 1 1/2" CALIPER; GUY TREES 2 1/2" CALIPER AND LARGER.
- EVERGREEN TREES: STAKE TREES 8'-0" TALL AND UNDER; GUY TREES 8'-0" TALL AND GREATER.

- TREE AND SHRUB PRUNING: PRUNE, THIN, AND SHAPE TREES AND SHRUBS ACCORDING TO STANDARD HORTICULTURAL PRACTICE. PRUNE TREES TO RETAIN REQUIRED HEIGHT AND SPREAD. DO NOT CUT TREE LEADERS; REMOVE ONLY INJURED OR DEAD BRANCHES FROM FLOWERING TREES. PRUNE SHRUBS TO RETAIN NATURAL CHARACTER. SHRUB SIZES INDICATED ARE SIZES AFTER PRUNING.
- GROUND COVER AND PLANT PLANTING:

- SET OUT AND SPACE GROUND COVER AND PLANTS AS INDICATED.
- DIG HOLES LARGE ENOUGH TO ALLOW SPREADING OF ROOTS, AND BACKFILL WITH PLANTING SOIL.
- WORK SOIL AROUND ROOTS TO ELIMINATE AIR POCKETS AND LEAVE A SLIGHT SAUCER INDENTATION AROUND PLANTS TO HOLD WATER.
- WATER THOROUGHLY AFTER PLANTING, TAKING CARE NOT TO COVER PLANT CROWNS WITH WET SOIL.
- PROTECT PLANTS FROM HOT SUN AND WIND; REMOVE PROTECTION IF PLANTS SHOW EVIDENCE OF RECOVERY FROM TRANSPLANTING SHOCK.

F. PLANTING BED MULCHING:

- INSTALL WEED-CONTROL BARRIERS BEFORE MULCHING ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. COMPLETELY COVER AREA TO BE MULCHED, OVERLAPPING EDGES A MINIMUM OF 6".
- MULCH BACKFILLED SURFACES OF PLANTING BEDS AND OTHER AREAS INDICATED. APPLY 3" AVERAGE THICKNESS OF MULCH, AND FINISH LEVEL WITH ADJACENT FINISH GRADES. DO NOT PLACE MULCH AGAINST PLANT STEMS.

- PROTECT EXTERIOR PLANTS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES, AND OTHERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR, OR REPLACE DAMAGED EXTERIOR PLANTING.
- REMOVE SURPLUS SOIL AND WASTE MATERIAL, INCLUDING EXCESS SUBSOIL, UNSUITABLE SOIL, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.

END OF SECTION 02930