May 23, 2013

ADDENDUM NO. 1
TO THE
INVITATION TO BID(ITB) - 4293
FOREST AVENUE IMPROVEMENT PROJECT
FOR THE
CITY OF ANN ARBOR, MICHIGAN

The following changes, additions, and/or deletions shall be made to the Bid Documents for the Forest Avenue Improvement Project, for the City of Ann Arbor, Michigan, Invitaion To Bid No. ITB - 4293.

The information contained herein shall take precedence over the original documents and all previous addenda, and is appended thereto. **This Addendum includes 16 page(s) and 5 drawing(s).**

The Contractor is to acknowledge receipt of this Addendum No. 1 on page P-1 of the Bid Documents prior to submitting its Proposal.

Changes in the Bid Documents which are outlined below are referenced to a page or drawing in which they appear conspicuously. The Bidder is to take note in its review of the documents and include these changes as they affect work or details in other areas not specifically referenced here.

Item #1: Contract Documents, BF-1 through BF-3;
Replace pages BF-1 through BF-3 with the attached revised BF-1(ADD–1-2) through BF-3(ADD –1 –4).

Item #2: Contract Documents, Detailed Specification:
Replace pages DS -4, DS – 8, DS – 18, DS – 19, DS – 40, DS – 43, DS – 53, DS – 54, DS – 55, DS – 57, DS – 58, and DS – 59 with the attached revised pages ADD – 1-5 through ADD -1-16

Item #3: Contract Plan Set; replace plan sheets 10, 11, 12, 15 and 16 with attached plan sheers.
The revised plans show changes to the Traffic Control and Transformer Park reconstructin.

BID FORM

Section 1 - Schedule of Prices

Item	Description	Unit	Estimated Quantity	Unit Price	Total Cost
130	PROTECTIVE FENCING	L.F.	2000	$	$
140	EXPLORATORY EXCAVATIONS (0-10 DEEP)	EACH	6	$	$
201	PROJECT SUPERVISION, MAX $10,000	L.S.	1	$	$
202	GENERAL CONDITIONS, MAX $60,000	L.S.	1	$	$
203	MINOR TRAFFIC DEVICES, MAX $10,000	L.S.	1	$	$
204	AUDIOVISUAL TAPE COVERAGE	L.S.	1	$	$
206	GEOTEXTILE	S.Y.	3200	$	$
207	MACHINE GRADING MODIFIED	S.Y.	6500	$	$
209	GEOGRID	S.Y.	3000	$	$
210	STONE RESERVOIR	C.Y.	2200	$	$
211	INFILTRATION TRENCH UNDERCUTTING	C.Y.	50	$	$
212	SUBGRADE UNDERCUTTING - TYPE II	C.Y.	100	$	$
213	TEMPORARY 4 INCH OR 6 INCH WATER MAIN LINE STOP	EACH	3	$	$
214	HYDRO SEPARATOR	EACH	2	$	$
215	LEACHING BASIN - 48" DIA	EACH	8	$	$
216	OIL & DEBRIS SEPARATOR	EACH	14	$	$
217	REMOVE AND REPLACE BRICK PAVERS, ANY TYPE	S.F.	250	$	$
220	HMA PAVEMENT BASE - 3E3	TON	520	$	$
221	HMA PAVEMENT LEVELING - 4E3	TON	520	$	$
222	HMA PAVEMENT WEARING - 5E3	TON	400	$	$
223	TEMPORARY HMA PAVEMENT	TON	50	$	$
230	REMOVE CONCRETE CURB OR CURB & GUTTER - ANY TYPE	L.F.	1550	$	$
231	REMOVE CONCRETE SIDEWALK AND DRIVEWAYS - ANY THICKNESS	S.F.	7400	$	$
235	CONCRETE CURB OR CURB & GUTTER - ANY TYPE	L.F.	1550	$	$
237	4 OR 6-INCH CONCRETE SIDEWALK, RAMP, OR DRIVE	S.F.	6975	$	$
238	8-INCH CONCRETE SIDEWALK, RAMP, OR DRIVE	S.F.	426	$	$
240	DETECTABLE WARNING, CAST IN PLACE	S.F.	144	$	$
241	ADJUST STRUCTURE COVER	EACH	20	$	$
242	ADJUST CURB INLET STRUCTURE COVER	EACH	8	$	$
243	ADJUST MONUMENT BOX OR GATE VALVE BOX	EACH	24	$	$
244	STRUCTURE COVERS	EACH	12	$	$
252	SEWER BULKHEAD, 4-INCH THROUGH 18-INCH DIAMETER	EACH	2	$	$
254	6-INCH WRAPPED INFILTRATION PIPE	L.F.	100	$	$
255	12-INCH WRAPPED INFILTRATION PIPE	L.F.	850	$	$
256	HYDRANT ASSEMBLY ABANDONMENT	EACH	1	$	$
260	SAND SUBBASE COURSE, CLASS II - C.I.P.	C.Y.	950	$	$
261	21AA LIMESTONE - C.I.P.	C.Y.	100	$	$
262	AGGREGATE BASE COURSE, 21AA - C.I.P	C.Y.	1500	$	$
270	NO PARKING SIGN	EACH	21	$	$
271	SIGN, PORTABLE CHANGEABLE MESSAGE, FURNISH AND OPERATE	EACH	2	$	$
272	PLASTIC DRUM - LIGHTED - FURNISH & OPERATE	EACH	70	$	$
273	BARRICADE TYPE III - LIGHTED - FURNISH AND OPERATE	EACH	10	$	$
274	TEMPORARY SIGN - TYPE B	S.F.	450	$	$
275	TEMPORARY SIGN - TYPE A	S.F.	50	$	$

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(Also Enter on BF-3)

BID FORM

Section 1 - Schedule of Prices

Item	Description	Unit	Estimated Quantity	Unit Price	Total Cost
320	RCP CL V, 12-INCH, TRENCH DETAIL I	L.F.	100	$	$
350	SDR 35 PVC RISER 6-INCH	V.F.	20	$	$
351	SDR 35 PVC RISER 8-INCH	V.F.	5	$	$
352	SDR 35 PVC RISER 10-INCH	V.F.	5	$	$
353	SDR 35 PVC SERVICE LEAD 6-INCH	L.F.	20	$	$
354	SDR 35 PVC SERVICE LEAD 8-INCH	L.F.	20	$	$
355	SDR 35 PVC SERVICE LEAD 10-INCH	L.F.	20	$	$
367	SINGLE INLET	EACH	2	$	$
385	SEWER PIPE ABANDONMENT	L.F.	141	$	$
386	SEWER STRUCTURE ABANDONMENT	EACH	2	$	$
400	12 INCH, CLASS 50 DIP W/ POLYWRAP, TD-1, MODIFIED	L.F.	600	$	$
401	8 INCH, CLASS 50 DIP W/ POLYWRAP, TD-1, MODIFIED	L.F.	10	$	$
402	4 INCH, CLASS 50 DIP W/ POLYWRAP, TD-1, MODIFIED	L.F.	72	$	$
414	12" 45 DEG BEND	EACH	2	$	$
416	12" 22-1/2 DEG BEND	EACH	4	$	$
423	8" X 6" REDUCER	EACH	2	$	$
430	12" X 12" X 4" TEE	EACH	2	$	$
431	12" X 12" X 8" TEE	EACH	2	$	$
432	12" X 12" X 12" TEE	EACH	1	$	$
440	FIRE HYDRANT ASSEMBLY	EACH	2	$	$
442	12" GATE VALVE-IN BOX	EACH	3	$	$
443	12" GATE VALVE-IN WELL	EACH	1	$	$
460	EXCAVATE & BACKFILL FOR WATER SERVICE TAP AND LEAD	L.F.	350	$	$
481	WATER MAIN PIPE ABANDONMENT	L.F.	600	$	$
482	GATE VALVE-IN-BOX ABANDONMENT	EACH	4	$	$
483	GATE VALVE-IN-WELL ABANDONMENT	EACH	2	$	$
564	RECONSTRUCT STRUCTURE	EACH	2	$	$
595	HOT-APPLIED, THERMOPLASTIC PAVEMENT MARKING, 4" YELLOW	L.F.	2000	$	$
596	HOT-APPLIED, THERMOPLASTIC PAVEMENT MARKING, 6" WHITE	L.F.	100	$	$
597	HOT-APPLIED, THERMOPLASTIC PAVEMENT MARKING, 24" WHITE	L.F.	250	$	$
614	3" SCHEDULE 80 PVC ELECTRICAL CONDUIT	L.F.	1500	$	$
620	ELECTRICAL HANDHOLE	EACH	4	$	$
702	INLET FILTER	EACH	14	$	$
703	SILT FENCE	L.F.	1100	$	$
882	SEEDING AND MULCHING	S.Y.	1000	$	$
891	CLEAN-UP & RESTORATION	L.S.	1	$	$

TOTAL THIS PAGE $ _____

(Also Enter on BF-3)

TRANSFORMER PARK

Item	Description	Unit	Estimated Quantity	Unit Price	Total Cost
207	MACHINE GRADING MODIFIED	S.Y.	440	$	$
212	SUBGRADE UNDERCUTTING - TYPE II	C.Y.	20	$	$
232	REMOVE CONCRETE SIDEWALK AND DRIVEWAYS - ANY THICKNESS	S.F.	3801	$	$
233	CONCRETE RIBBON	S.F.	400		
235	CONCRETE CURB OR CURB & GUTTER - ANY TYPE	L.F.	190	$	$
236	4 OR 6-INCH COLORED CONCRETE SIDEWALK, RAMP, OR DRIVE	S.F.	1877	$	$
239	4 OR 6-INCH CONCRETE SIDEWALK, RAMP, OR DRIVE - EXPOSED AGGREGATE	S.F.	1524	$	$
241	ADJUST STRUCTURE COVER	EACH	6	$	$
243	ADJUST MONUMENT BOX OR GATE VALVE BOX	EACH	2	$	$
260	SAND SUBBASE COURSE, CLASS II - C.I.P.	C.Y.	70	$	$
277	REMOVE BENCH	EACH	2	$	$
702	INLET FILTER	EACH	10	$	$
891	CLEAN-UP & RESTORATION	L.S.	1	$	$

TOTAL THIS PAGE $ _____

TOTAL FROM PAGE BF-1 $ _____

TOTAL FROM PAGE BF-2 $ _____

TOTAL BASE BID : $ _____

maintenance aggregate and HMA 13A mixture, as required and directed by the Engineer for maintenance of traffic and local access, shall be included in contract pay item "Item No 202, General Conditions," and it will not be paid for separately.

The work of maintaining and relocating existing warning, regulatory and/or guide signs; and of removing, salvaging and reinstalling existing signs and supports is included in the bid price for the contract pay item “Item No. 203, Minor Traffic Control. "

Mailboxes and newspaper boxes that are in the way of the construction shall be removed and reset immediately in a temporary location approved by the Engineer. Mail and paper delivery shall not be interrupted during the construction. Upon completion of the construction, all mailboxes and newspaper boxes, including their supports, shall be repositioned in their permanent locations as approved by the Engineer. This work shall be included in the contract unit price for the contract pay item “Item No 202, General Conditions,” and it will not be paid for separately.

The Contractor shall perform the work of this Contract while maintaining traffic in accordance with the Contract Documents as specified herein. No traffic shall be allowed on newly placed asphalt surfaces until rolling has been satisfactorily completed and the surface has cooled sufficiently to prevent damage from traffic. This is to be accomplished by flag persons and by relocating traffic control devices to prevent traffic from entering the work area until such time that it can be safely maintained without damaging the new construction. The Contractor shall provide traffic regulators in sufficient number to maintain traffic as described herein, and to keep traffic off sections being surfaced, and provide for safe travel at all times as directed by the Engineer.

Each pressure distributor, paver and roller shall be equipped with at least one approved flasher light which shall be mounted on the equipment so as to give a warning signal ahead and behind.

There may be areas where the Engineer directs the paving of less than the full width of a phase to stager the paving joints and to accommodate changes in crown and/or cross-sectional dimensions/locations. In these locations the gravel base courses shall be constructed to the full area of the phase, and the Contractor shall place traffic control devices on the base course grade as necessary, and shall place, maintain, and remove maintenance aggregate (MDOT 21AA) all as necessary, and as directed by the Engineer, to maintain local traffic to side streets and drives.

The City will not allow any shut down of existing utilities without prior written approval of construction methods and timing of shut down, by the City and the Engineer. All water main valves are to be operated by City personnel.

Plans are provided that detail complete closure of Forest Avenue, while maintaining a detour for Forest Avenue traffic along adjacent roads. Trenches in the road are to be protected by temporary plastic drums and fencing or as approved by the Engineer.

Contractor is allowed to develop alternative phasing plans, but must be approved by Engineer prior to the start of construction.

DETAILED SPECIFICATION
FOR
ITEM #202 - GENERAL CONDITIONS, MAX $60,000

DESCRIPTION

This item shall include all work described and required by the Plans and Specifications for which no item of work is listed in the Bid Form, including but not limited to:

- Scheduling and organization of all work, subcontractors, suppliers, testing, inspection, surveying, and staking
- Coordination of, and cooperation with, other contractors, agencies, departments, and utilities
- Protection and maintenance of Utilities
- Placing, maintaining, and removing all soil erosion and sedimentation controls
- Maintaining drainage
- Maintaining drives, drive openings, sidewalks, bikepaths, mail deliveries, and solid waste/recycle pick-ups
- Storing all materials and equipment off lawn areas
- Temporary relocation and final replacement/re-setting of mailboxes
- Site clean-up
- Coordination efforts to furnish various HMA mixtures as directed by the Engineer
- Coordination efforts to furnish and operate various-size vehicles/equipment as directed by the Engineer
- Furnishing and operating vacuum-type street cleaning equipment
- Furnishing and operating vacuum-type utility structure cleaning equipment
- Furnishing and operating both vibratory plate and pneumatic-type ("pogo-stick") compactors
- Furnishing and operating a backhoe during all work activities
- Furnishing and operating a jackhammer and air compressor during all work activities
- Noise and dust control
- Mobilization(s) and demobilization(s)
- Furnishing submittals and certifications for materials and supplies
- Parking meter bags
- Disposing of excavated materials and debris
- All miscellaneous and incidental items such as overhead, insurance, and permits.

MEASUREMENT AND PAYMENT

This item of work will be paid for on a pro rata basis at the time of each progress payment. Measurement will be based on the ratio between work completed during the payment period and the total contract amount. When all of the work of this Contract has been completed, the measurement of this item shall be 1.0 Lump Sum.

The completed work as measured for this item of work will be paid for at the Contract Unit Price for the following Contract (Pay) Item:

PAY ITEM	PAY UNIT
General Conditions, Max $60,000	Lump Sum

The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the City Standard Specifications and as modified by this Detailed Specification.

MATERIALS

K. Aggregate/Sand Materials:
   1. Aggregate Base Course:
      a. MDOT 21AA, Modified
         1) Crushed limestone.
         2) Thickness in accordance with Drawing for cross section.
         3) Paid for as item #262 Aggregate Base Course, 21AA – C. I. P.
   2. Stone Reservoir:
      a. MDOT 6AA
         1) Washed.
         2) Thickness and width: as shown on Plans.

L. Geotextile
   1. Nonwoven.
   2. Minimum Properties:
      a. Weight - 6 oz.
      b. Marafi 160N, TerraTex N06, US Fabric 165 NW, or approved equal.

M. Geogrid
   1. Polypropylene triaxial grid.
   2. Minimum Properties:
      c. Minimum Rib Thickness: 0.03 inches (0.76 mm)
      d. Tensile Strength @2% Strain (ASTM D6637): 280 lbs/ft
      e. Tensile Strength @5% Strain (ASTM D6637): 580 lbs/ft
      f. Ultimate Tensile Strength (ASTM D6637): 850 lbs/ft
      g. Flexural Stiffness (ASTM D5732): 250,000 mg-cm
      h. Resistance to Installation Damage (ASTM D5818 & D6637): 93%
      i. Tensar TX 5 or approved equal.

CONSTRUCTION METHODS

PREPARATION

A. Subgrade Preparation:
   1. Avoid compaction of subgrade soil unless directed or approved by Engineer.
   2. Scarify compacted or disturbed subgrade soils to a minimum depth of 6 inches with York rake; or equivalent method and light tractor.
   3. Remove accumulation of fine materials due to ponding or surface erosion with light equipment.
   4. Conform to line, grade, and elevations indicated.
      a. Excavate, fill, re-grade, and scarify areas damaged by erosion, ponding or traffic compaction.
      b. Use light equipment.
   5. Proof Roll:
      a. To identify soft or unstable areas.
      b. Use light equipment, avoid over compacting subgrade.
   6. Do not place geotextile or geogrid until subgrade surface has been inspected and approved by Engineer.

B. Stone Reservoir Trench & Geotextile
   1. Begin installation of stone reservoir immediately after approval of subgrade preparation.
   2. Do not place sand or aggregate materials on a frozen base, subbase, or subgrade.
   3. Remove any accumulation of debris or sediment which has taken place after approval of subgrade and installation of stone reservoir and prior to installation of the geotextile, at the contractor's expense.

4. Place geotextile in accordance with Manufacturer's standards and recommendations.
    a. Overlap Adjacent Strips: Minimum 16 inches.
    b. Prevent runoff or sediment from entering the stone reservoir.
5. Place backfill for stone reservoir in uniform layers such that when compacted, they have the thicknesses shown on the Plans, or as directed by the Engineer.
6. The loose measure of any layer -- not more than 9-inches or less than 4-inches.
7. Compact backfill to a minimum of 95% of the maximum density per City Standard Specifications.

C. Geogrid Installation:
1. Place geogrid and aggregate base course immediately after installation of stone reservoir.
2. Remove any accumulation of debris or sediment which has taken place after approval of subgrade and installation of stone reservoir prior to installation of the geogrid, at the contractor's expense.
3. Place geogrid in accordance with Manufacturer's standards and recommendations.
    a. Overlap Adjacent Strips: Minimum 16 inches.
    b. Prevent runoff or sediment from entering the storage bed.
4. Place aggregate base course to grades indicated on Drawings.
    a. Maximum Lift Thickness: 10 inches.
    b. Minimum Lift Thickness: 6 inches.
    c. Compact each layer to a minimum of 95% of the maximum density per City Standard Specifications.
    d. Fine grade as necessary to conform to elevations and cross section indicated on the Drawings.
    e. Roll aggregate layer with paving roller until smooth, as directed by Engineer.

D. Do not place bituminous material until the aggregate surface has been inspected, proof rolled and approved by Engineer.

MEASUREMENT AND PAYMENT

The items of work included in this Detailed Specification shall be paid for at the Contract Unit Price based on Plan Quantity (as shown below), which shall be payment in full for all labor, material and equipment needed to accomplish all the work described in this detailed specification, which includes, but is not limited to: furnishing, placement, and compaction of all aggregate materials and furnishing and placement of geotextile or geogrid.

The Contractor is responsible to perform his/her own computations of the quantities required to complete all of the work described in this Detailed Specification and on the Plans, and include all of his/her costs to complete ALL of the work for this pay item. Plan quantity will be paid for the work, and will only be adjusted due to changes in the station limits of the project, as directed by the Engineer, in writing.

Price adjustments shall be enforced by the City if materials are not in accordance with specifications.

All costs for furnishing and operating vacuum-type street cleaning equipment, backhoes, jackhammers, air compressors, and other equipment necessary to complete the work shall be included in the bid prices for these items of work or in the item of work "General Conditions. "

The completed work as measured for these items of work will be paid for at the Contract Unit Prices for the following Contract (Pay) Items:

PAY ITEM	**PAY UNIT**
Geotextile	Square Yard
Geogrid	Square Yard
Stone Reservoir	Cubic Yard

DETAILED SPECIFICATION
FOR

ITEM #233 CONCRETE RIBBON
ITEM #235 CONCRETE CURB OR CURB & GUTTER - ANY TYPE
ITEM #236 4 OR 6-INCH COLORED CONCRETE SIDEWALK, RAMP, OR DRIVE
ITEM #237 4 OR 6-INCH CONCRETE SIDEWALK, RAMP, OR DRIVE
ITEM #238 8-INCH CONCRETE SIDEWALK, RAMP, OR DRIVE
ITEM #239 4 OR 6-INCH CONCRETE SIDEWALK, RAMP, OR DRIVE - EXPOSED AGGREGATE

DESCRIPTION

This work shall consist of constructing concrete items including curb, gutter, curb and gutter, sidewalks, drive approaches, MDOT Type M drive openings, steel reinforcement, mechanical anchors and hook bolts, all of any type and/or dimensions, all of either regular, fibermesh reinforced, and/or high-early concrete, in accordance with Sections 601, 602, 603, 801, 802, and 803 of the 2012 MDOT Standard Specifications for Construction, except as specified herein, as shown on the Plans, as shown in this Detailed Specification, and as directed by the Engineer.

The Contractor is responsible to construct all sidewalks, sidewalk ramps, curbs, and all other concrete items within ADAAG compliance. All sidewalks and curb ramps must be constructed in accordance with MDOT Standard Detail R-28-H (version in place at time of the bid letting).

MATERIALS

Concrete mixtures shall be as follows (or as directed by the Engineer), and concrete materials shall meet the requirements specified in the referenced sections of the MDOT Standard Specifications:

Concrete Item	Concrete Mixture	MDOT Section
Curb or Curb & Gutter	P1, 6-sack	601
4" or 6" Sidewalk, Ramp, Or Drive and –Park	P1, 6-sack	601
8” Sidewalk, Ramp, Or Drive	P1, 6-sack	601
Concrete Ribbon	P1, 6-sack	601

Colored concrete shall be Scofield Chromix admixtures or approved equal. Contractor shall provide concrete color samples to City Engineer for review and selection. Selected admixture shall be mixed with concrete per manufacturers specifications.

CONSTRUCTION METHODS

General

Concrete items, including sidewalk, non-integral curb/gutter, drives, and structure adjustments shall be completed prior to the placement of pavement.

All subgrade work shall be completed prior to placing concrete items, unless directed or approved by the Engineer.

The subbase shall be trimmed to final elevation before placing curb. Curb shall not be placed on a pedestal or mound.

The Contractor shall excavate, cut, remove stumps, remove brush, remove pavement, grade, and trim as needed and as directed, and shall import, furnish, fill, place, grade, and compact MDOT Class II granular material and MDOT 21AA, Modified Aggregate material as needed to: construct new concrete items; to repair or replace existing concrete items; to relocate existing concrete items to their new specified/directed elevations/locations, including all necessary grading at elevation changes of curb and gutter, sidewalks and ramps; and at locations where existing concrete items are to be removed and turf is to be established in its place.

A deduction in length for catch basins and inlet castings will be made to measurements of Curb and Gutter.

Curb, gutter, curb and gutter, and MDOT type M openings, shall be paid as "Concrete Curb or Curb & Gutter - ALL TYPES."

All miscellaneous hand work is considered included in the pay items of work and shall not be paid for separately.

Restoration work, including backfilling, compacting, HMA patching adjacent to concrete items, topsoiling and seeding will not be paid for separately, but shall be included in the appropriate associated items of work.

Payment for saw cutting for Type M openings and for partial removal of existing drives shall be included in the price for the item of work, "Remove Concrete Sidewalk & Driveways - Any Thickness", and will not be paid for separately.

Payment for the removal of HMA pavement and aggregate base to provide space for concrete formwork and vibratory plate compactor shall be included in the price for the item of work, "Remove Concrete Curb and Gutter - Any Type", and will not be paid for separately.

The Item, "Detectable Warnings, Cast In Place" will be measured and paid for by the square foot of area stamped, typically 2' x 5'. This measurement/payment is in addition to the measurement/payment for the concrete ramp placement.

Completed work as measured for these items of work will be paid for at Contract Unit Price for the following Contract (Pay) Items:

PAY ITEMS	**PAY UNIT**
Concrete Ribbon	Lineal Foot
Concrete Curb or Curb & Gutter - Any Type	Lineal Foot
4 or 6-Inch Concrete Sidewalk, Ramp, or Drive	Square Foot
4 or 6-Inch Colored Concrete Sidewalk, Ramp, or Drive	Square Foot
4 or 6-Inch Concrete Sidewalk, Ramp, or Drive - Exposed Aggregate	Square Foot
8-Inch Concrete Sidewalk, Ramp, or Drive	Square Foot

The unit prices for these items of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.

ADD -1-10

DETAILED SPECIFICATION
FOR
ITEM #260 - SAND SUBBASE COURSE, CLASS II - C.I.P.
ITEM #261 - 21AA LIMESTONE - C.I.P.
ITEM #262 - AGGREGATE BASE COURSE, 21AA - C.I.P.

DESCRIPTION

This work shall consist of constructing an aggregate subbase or base course on an existing aggregate surface, or on a prepared subgrade in accordance with Sections 301, 302 and 307 of the 2012 edition of the MDOT Standard Specifications for Construction, except as specified herein.

MATERIAL

The materials used for this work shall be MDOT 21AA and Class II granular material meeting the requirements of the City of Ann Arbor Standard Specifications. Material for aggregate shoulders shall be MDOT 22A.

CONSTRUCTION METHOD

Sand or aggregate courses shall not be placed if, in the opinion of the Engineer, there are any indications that they may become frozen before their specified densities are obtained.

Sand or aggregate courses shall not be placed on a frozen base, subbase or subgrade.

The Contractor shall not use rubber-tired equipment on the grade, when its use causes, or may cause, in the opinion of the Engineer, damage to the grade. The Contractor shall conduct his/her operation(s), and provide all necessary equipment, to insure the satisfactory completion of the work without damaging the grade. This includes the transporting, stockpiling, rehandling, and movement of materials over additional distances, in lieu of driving on an unprotected, or partially unprotected, grade.

The Contractor is solely responsible for the maintenance and protection of the grade. Further, any damage to the grade which, in the opinion of the Engineer, is caused as a result of the Contractor's operation(s), or his/her subcontractors' or suppliers' operation(s), shall be repaired by the Contractor at the Contractor's expense. This includes any additional earthwork and/or maintenance materials as directed by the Engineer, for the purposes of the Contractor's maintenance and protection of the grade.

The Contractor shall shape the base, subbase and subgrade to the elevations, crowns, and grades as specified on the Plans and as directed by the Engineer. This may include regrading the subbase to provide different crown grades than those existing prior to the construction.

The Contractor shall remove, add to, re-shape, re-grade, and re-compact the existing roadbed materials, and shall construct the roadway to the cross-section(s) as indicated on the Plans, as detailed in the Specifications, and as directed by the Engineer. The Contractor shall use blade graders, maintainers, vibratory rollers, and/or other equipment as necessary, and as directed by the Engineer, for this work. Use of each specific piece of equipment is subject to the approval of the Engineer.

The Contractor shall maintain the base, subbase and subgrade in a smooth, well drained condition at all times.

Sand and aggregate courses shall be placed in uniform layers such that when compacted, they have the thicknesses shown on the Plans, or as directed by the Engineer. The loose measure of any layer shall not be more than 9-inches nor less than 4-inches.

Sand subbase and aggregate base courses shall be compacted to not less than 98% of their respective maximum unit weights, as determined by the AASHTO T-180 test.

All granular materials shall be deposited from trucks or through a spreader in a manner that will minimize segregation of material.

Manholes, valve boxes, inlet structures and curbs shall be protected from damage. Manholes & inlet structures shall be continuously cleaned of construction debris and properly covered at all times during the construction. Upon completion of each days work, manholes, water valve boxes, inlets and catch basins shall be thoroughly cleaned of all extraneous material.

At various times throughout the work, the Engineer may direct the Contractor to use smaller and/or lighter equipment, and to defer certain work tasks, in order to protect the grade and/or adjacent areas. The Contractor shall not be entitled to any additional compensation for the use of smaller equipment, lighter equipment, or work task deferral.

MEASUREMENT AND PAYMENT

Where granular materials are used as base, as subbase, or as fill for excavations in Machine Grading areas, items of work "Aggregate Base Course 21AA -C.I.P." and "Sand Subbase Course CL II - C.I.P." shall be measured and paid accordingly.

Where granular materials are used as fill for undercuts at locations other than Machine Grading areas, item of work "21AA Limestone - C.I.P." shall be measured and paid accordingly.

The completed work as measured for these items of work will be paid for at the Contract Unit Prices for the following Contract (Pay) Items:

PAY ITEM	PAY UNIT
Sand Subbase Course Class II - C.I.P.	Cubic Yard
21AA Limestone - C.I.P.	Cubic Yard
Aggregate Base Course 21AA - C.I.P.	Cubic Yard

The unit prices for these items of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.

DETAILED SPECIFICATION
FOR

ITEM #270 – NO PARKING SIGN
ITEM #271 – SIGN, PORTABLE CHANGEABLE MESSAGE, FURNISH AND OPERATE
ITEM #272 – PLASTIC DRUM - LIGHTED – FURNISH & OPERATE
ITEM #273 – BARRICADE TYPE III - LIGHTED - FURNISH AND OPERATE
ITEM #274 – TEMPORARY SIGN - TYPE B
ITEM #275 – TEMPORARY SIGN - TYPE A

DESCRIPTION

This work shall consist of protecting and maintaining vehicular and pedestrian traffic, in accordance with Sections 103.05, 103.06, and 812, of the 2012 MDOT Standard Specifications for Construction; Part 6 of the Michigan Manual of Uniform Traffic Control Devices, Latest Revised Edition (MMUTCD); and the City Standard Specifications, except as modified herein.

MATERIALS, EQUIPMENT, AND CONSTRUCTION METHODS

General

Materials and equipment shall meet the requirements specified in the above-designated sections of the 2012 MDOT Standard Specifications.

The Contractor shall maintain two-way traffic on major streets, access for local traffic on local streets, and keep all intersections open to traffic at all times, unless specifically authorized in writing by the Engineer.

The Contractor shall maintain traffic such that no vehicle shall be required to drive into active work areas. Patch areas which extend more than halfway across the roadway shall be removed and replaced so as to provide a minimum of half the pavement width at all times for maintaining traffic.

The Contractor shall keep all driveways open at all times, unless specifically authorized in writing by the Engineer.

The Contractor shall maintain pedestrian traffic at all times. For maintaining normal pedestrian traffic while performing sidewalk and driveway repair, Type I barricades shall be placed by the Contractor, as directed by the Engineer. "Sidewalk Closed" and/or "Cross Here" signs shall be placed, by the Contractor, when directed by the Engineer.

All temporary traffic/pedestrian control devices furnished by the Contractor shall remain the property of the Contractor. The City shall not be responsible for stolen or damaged signs, barricades, barricade lights or other traffic maintenance items. The Contractor shall replace missing traffic control devices immediately, at no additional cost to the City.

All existing signs, and signs erected by the City on this project shall be preserved, protected, and maintained by the Contractor. Existing City owned signs which are damaged by the Contractor during the work will be repaired by the City at the Contractor's expense.

A lane-closure permit shall be obtained by the Contractor from the City Transportation Division, at least 48 hours in advance of any proposed lane or street closing.

The hours of work on all Local streets are 7:00 a.m. to 8:00 p.m., Monday through Saturday, or as specified on the lane-closure permit. No equipment will be allowed in the street before or after these hours. Local streets may only be closed to through traffic (local access only) with written authorization of the Engineer. Work must be completed each

MEASUREMENT AND PAYMENT

General

All temporary traffic/pedestrian control devices furnished by the Contractor shall remain the property of the Contractor. The City shall not be responsible for stolen or damaged signs, barricades, barricade lights or other traffic maintenance items. The Contractor shall replace missing traffic control devices immediately, at no additional cost to the City.

Costs for transporting barricades and other traffic control devices shall be included in the bid prices for the individual items of work.

Barricade Type III - Lighted - Furnish and Operate

Payment for furnishing and operating lighted Type III barricades shall be for the maximum quantity in-place at any one time during the work of the entire project (all streets).

Temporary Sign - Type B

Payment for Type B signs shall be for the maximum quantity used on each street.

Temporary Sign - Type A

Payment for Type A signs shall be for the maximum quantity used on each street.

Plastic Drum - Lighted – Furnish and Operate

There will be a one-time payment for each street for the maximum number of lighted drums in-place (operated) at any one time, as directed by the Engineer.

No-Parking Signs

No-Parking Signs will be measured as the maximum number installed on each street at any one time. The unit price includes the removal and return of No-Parking signs to the City upon completion of the project. The Contractor shall be backcharged for the replacement costs for damaged or unreturned signs.

Portable Changeable Message Signs

Measurement for furnishing and operating Portable Changeable Message Signs will be for the maximum quantity in-place at any one time during the work of the entire project (all streets).

The completed work as measured for these items of work will be paid for at the Contract Unit Price for the following Contract (Pay) Items:

PAY ITEM	**PAY UNIT**
Plastic Drum - Lighted - Furnish& Operate	Each
Barricade Type III - Lighted - Furnish and Operate	Each
Temporary Sign, Type B	Square Foot
Temporary Sign, Type A	Square Foot
No-Parking Sign	Each
Sign, Portable Changeable Message, Furnish and Operate	Each

DETAILED SPECIFICATION
FOR
ITEM #277 – REMOVE BENCH

DESCRIPTION

This work shall consist of removing benches, all associated footings, and hardware and any base or surface work required in accordance the 2012 MDOT Standard Specifications for Construction, except as specified herein, as shown on the Plans, as shown in this Detailed Specification, and as directed by the Engineer.

MATERIALS

Sand base, where required, shall consist of Class II granular material in accordance with Division III of the City Standard Specifications.

CONSTRUCTION METHODS

The Contractor shall remove benches, all associated footings and hardware, and subgrade to the limits specified by the Engineer. Where an existing base is not present, the subbase shall be removed to a sufficient depth for construction of the proposed section as shown on the attached detail, or as directed by the Engineer.

The Contractor shall remove, reshape, regrade, and recompact the existing base materials, and shall construct the base to match the existing adjacent elevations.

The Contractor shall take any necessary precautions to prevent damage to adjacent concrete during removal and replacement. The Contractor is not entitled to any additional compensation for such replacement of damaged concrete.

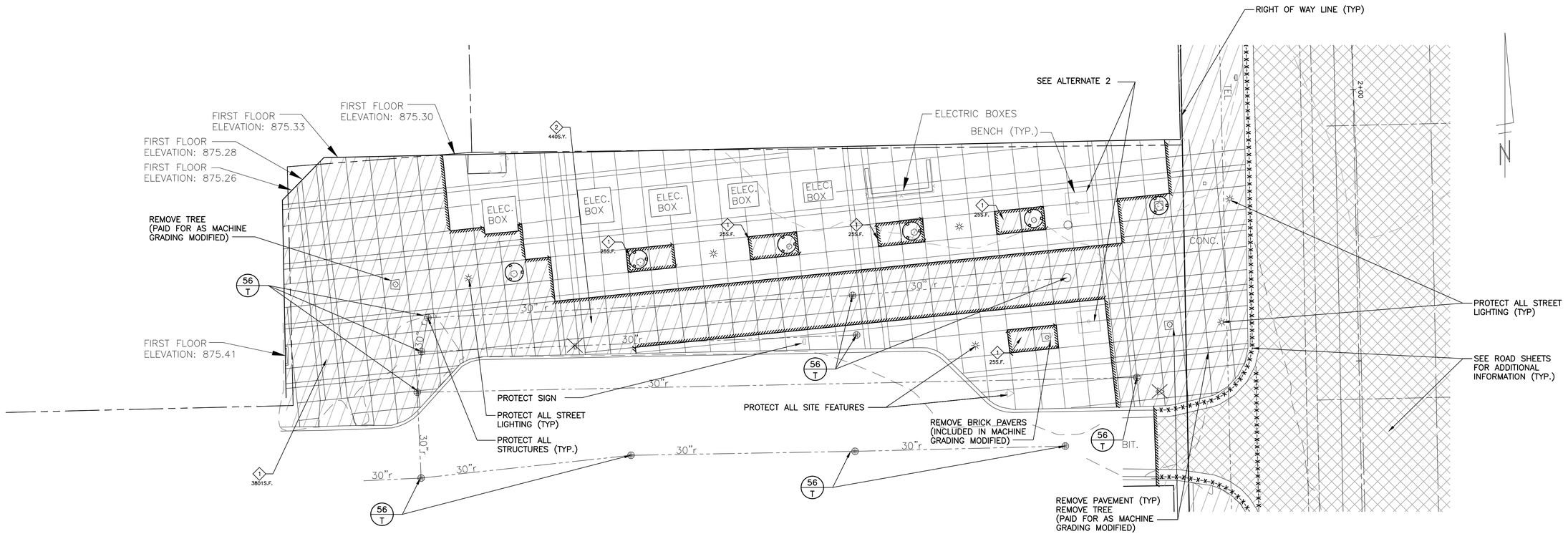
At various times throughout the work, the Engineer may direct the Contractor to use smaller and/or lighter equipment, and to defer certain work tasks, in order to protect the grade and/or concrete. The Contractor shall not be entitled to any additional compensation for the use of smaller equipment, lighter equipment, work task deferral, or any delays that result.

MEASUREMENT AND PAYMENT

Completed work as measured for this item of work will be paid for at Contract Unit Price for the following Contract Pay Item:

PAY ITEM	PAY UNIT
Remove Bench	Each

The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.



REMOVAL KEY	
KEY	PAY ITEM DESRIPTION
1	REMOVE CONCRETE SIDEWALK AND DRIVEWAYS – ANY THICKNESS

REMOVAL LEGEND

- CONCRETE SIDEWALK REMOVAL (PAID FOR AS REMOVE CONCRETE SIDEWALK AND DRIVEWAYS – ANY THICKNESS)
- COMPLETE PAVEMENT REMOVAL (PAID FOR AS MACHINE GRADING MODIFIED) SEE ROAD SHEETS.
- SAWCUT. (PAID FOR AS MACHINE GRADING MODIFIED)
- REMOVE CONCRETE CURB OR CURB AND AND GUTTER–ANY TYPE
- REMOVE, SALVAGE, AND REINSTALL SIGN, POST, AND BASE (PAID FOR AS PART OF MINOR TRAFFIC CONTROL DEVICES)
- REMOVE, SALVAGE AND REINSTALL EXISTING PARKING METERS (SEE NOTE 4)
- TREE PROTECTION (PAID FOR AS PROTECTIVE FENCING)

BENCH MARKS

BENCHMARK: 867.50
RR SPIKE IN WEST FACE LIGHT POLE, EAST SIDE FOREST AVE, 130 FEET NORTH OF HILL ST.

BENCHMARK: 873.62
TOP OF SOUTHEAST CORNER OF FIRST STEP TO PARKING GARAGE, NORTHWEST QUAD OF FOREST AVE AND WILLARD ST.

NOTES

1. ANY REMOVAL BEYOND THE LIMITS SHOWN WILL BE AT CONTRACTOR'S EXPENSE TO REMOVE/REPLACE IN KIND.
2. PROTECT TREES, SHRUBS AND LANDSCAPING FROM ALL DAMAGE DURING CONSTRUCTION
3. SIDEWALK AND DRIVEWAY REMOVAL LIMITS SHOWN ARE AN ESTIMATE. SAWCUT AT NEAREST CONSTRUCTION JOINT FROM WHAT IS INDICATED ON PLANS.
4. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING UTILITIES THAT CROSS OR ARE OTHERWISE EXPOSED IN THE EXCAVATIONS FOR THE PROJECT. HAND EXCAVATE IN THE VICINITY OF THE INDICATED UTILITIES TO EXPOSE THE EXACT LOCATIONS PRIOR TO BEGINNING MASS EXCAVATION. ANY INADVERTENT DAMAGE TO THE EXISTING UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE AND IN ACCORDANCE WITH THE UTILITY AND OWNER'S REQUIREMENTS.
5. A 30–INCH REINFORCED CONCRETE PIPE DETENTION SYSTEM IS LOCATED BELOW GRADE AT TRANSFORMER PARK. COVER ABOVE PIPE IS LIMITED TO 1.5–FT. CONTRACTOR SHALL NOT UTILIZE ANY HEAVY EQUIPMENT IN THIS AREA. ALL REMOVAL AND CONSTRUCTION EQUIPMENT, AND VEHICLES FOR CONCRETE DELIVERY AND PLACEMENT SHALL BE ITEMIZED AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ANY WORK IN THE AREA.

A1

MDEQ SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

KEY	DETAIL	CHARACTERISTICS
56	Catch Basin, Filter Bag	Manufactured filter bag inserted under casting. Collects sediment at catch basin inlet. Paid for as part of General Conditions

XX T TEMPORARY MEASURE
YY P PERMANENT MEASURE

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	05-23-2013	ATP	CEW
01	BID SET	05-08-2013	ATP	CEW

CITY OF ANN ARBOR
PUBLIC SERVICE
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734.794.6410
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

FOREST AVENUE IMPROVEMENT PROJECT
TRANSFORMER PARK
REMOVAL AND SESC PLAN

SCALE PLAN: 1" = 10'

DRAWING No.
C010110612

SHEET No.
10 OF 17

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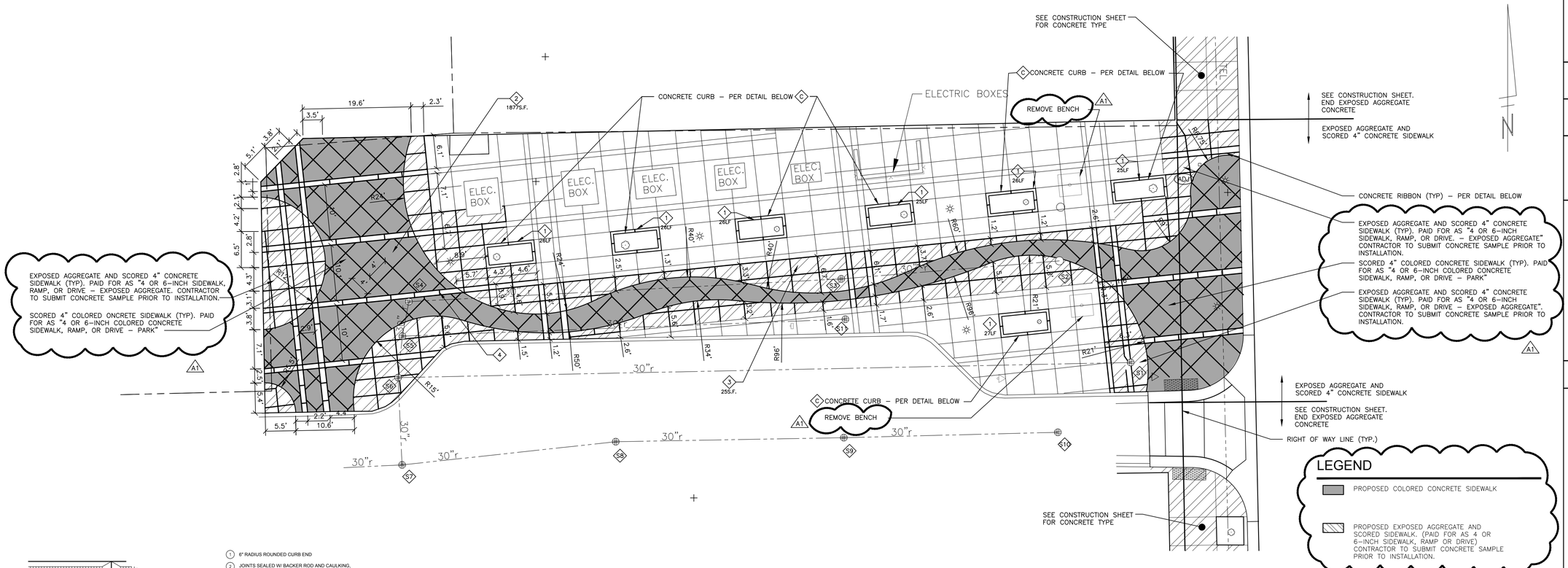
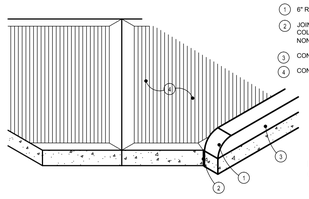


LEGEND

- PROPOSED COLORED CONCRETE SIDEWALK
- PROPOSED EXPOSED AGGREGATE AND SCORED SIDEWALK. (PAID FOR AS 4 OR 6–INCH SIDEWALK, RAMP OR DRIVE) CONTRACTOR TO SUBMIT CONCRETE SAMPLE PRIOR TO INSTALLATION.

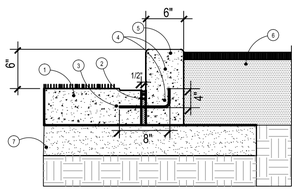


1. 6" RADIUS ROUNDED CURB END
2. JOINTS SEALED W/ BACKER ROD AND CAULKING, COLOR TO MATCH CONCRETE NON ASPHALTIC ½" PREMOLDED EXPAN. JNT.
3. CONCRETE CURB - LIGHT BROOM FINISH
4. CONCRETE WALK - SEE LAYOUT PLAN

NOTE: ALL WORK CONSIDERED INCIDENTAL TO CONCRETE SIDEWALK OR CURB PAY ITEMS.

CONCRETE CURB EDGE END - ISOMETRIC VIEW ◇C

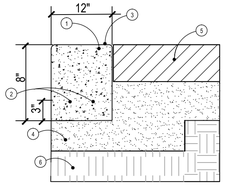
NOT TO SCALE



1. 4-INCH SIDEWALK PAID FOR AS "4 OR 6-INCH SIDEWALK, RAMP, OR DRIVE - EXPOSED AGGREGATE" (SF).
2. JOINTS SEALED W/ BACKER ROD AND CAULKING, COLOR TO MATCH CONCRETE NON ASPHALTIC ½" PREMOLDED EXPAN. JNT. INCIDENTAL TO CURB WORK.
3. 12" LONG #4 RE-BAR, 18" O.C. INCIDENTAL TO CURB WORK. INCIDENTAL TO CURB WORK.
4. #4 RE-BAR. INCIDENTAL TO CURB WORK.
5. CONCRETE CURB WITH LIGHT BROOM FINISH. ALL WORK PAID AS "CONCRETE CURB OR CURB & GUTTER - ANY TYPE."
6. PLACE WOOD CHIPS, PAID FOR AS "CLEAN-UP & RESTORATION".
7. 4-INCH CLASS II SAND PAID FOR "SAND SUBBASE COURSE, CLASS II - C.I.P.

SIDEWALK W/ CURB SECTION ◇C

NOT TO SCALE



1. CONCRETE RIBBON (SF).
2. #4 RE-BAR. INCIDENTAL TO 4 OR 6-INCH SIDEWALK, RAMP, OR DRIVE PAY ITEM.
3. CONCRETE RIBBON WITH LIGHT BROOM FINISH SHALL MATCH EXISTING RIBBON OUTSIDE OF REMOVAL LIMITS. PAID FOR AS CONCRETE RIBBON (S.F.).
4. 4-INCH CLASS II SAND PAID FOR "SAND SUBBASE COURSE, CLASS II - C.I.P.
5. EXISTING OR PROPOSED SIDEWALK.
6. EXISTING GRADE

CONCRETE RIBBON SECTION

NOT TO SCALE
PAID FOR AS "CONCRETE RIBBON" (SF).

A1

CONSTRUCTION KEY

KEY	PAY ITEM DESRIPTION	CITY OF ANN ARBOR DETAIL
1	CONCRETE CURB OR CURB & GUTTER – ANY TYPE	THIS SHEET
2	4 OR 6–INCH COLORED CONCRETE SIDEWALK, RAMP, OR DRIVE – PARK	SD–R–6
3	4 OR 6–INCH SIDEWALK, RAMP, OR DRIVE – EXPOSED AGGREGATE	SD–R–6
4	CONCRETE RIBBON	THIS SHEET

A1

STRUCTURE TABLE

STRUCTURE NUMBER	EXISTING RIM ELEVATION	ADJUSTMENT ELEVATION*
S1	875.70	875.70
S2	875.88	875.88
S3	875.66	875.66
S4	874.99	874.90
S5	874.88	874.87
S6	874.91	874.91
S7	874.21	N/A
S8	874.65	N/A
S9	874.74	N/A
S10	874.73	N/A
S11	875.48	N/A

*REMOVE, REPLACE AND ADJUST COVER/RIM/CASTING PER ENGINEER (PAID AS EITHER "ADJUST STRUCTURE COVER", "ADJUST CURB INLET STRUCTURE COVER" OR ADJUST MONUMENT BOX OR GATE VALVE AND BOX)

BENCH MARKS

BENCHMARK: 867.50
RR SPIKE IN WEST FACE LIGHT POLE, EAST SIDE FOREST AVE, 130 FEET NORTH OF HILL ST.

BENCHMARK: 873.62
TOP OF SOUTHEAST CORNER OF FIRST STEP TO PARKING GARAGE, NORTHWEST QUAD OF FOREST AVE AND WILLARD ST.

NOTES

1. PROTECT ALL TREES AND SITE FIXTURES. ANY DAMAGE CAUSED BY CONTRACTOR SHALL BE REPAIRED OR REPLACED AT CONTRACTORS EXPENSE.

2. CONTRACTOR TO ENSURE POSITIVE DRAINAGE ON NORTH SIDE OF PLANTERS PRIOR TO RAISED CURB INSTALLATION. THE ENGINEER SHALL BE NOTIFIED OF ANY POTENTIAL AREAS WITH LOW POINTS OR INSUFFICIENT SLOPE IMMEDIATELY.

3. A 30–INCH REINFORCED CONCRETE PIPE DETENTION SYSTEM IS LOCATED BELOW GRADE AT TRANSFORMER PARK. COVER ABOVE PIPE IS LIMITED TO 1.5–FT. CONTRACTOR SHALL NOT UTILIZE ANY HEAVY EQUIPMENT IN THIS AREA. ALL REMOVAL AND CONSTRUCTION EQUIPMENT, AND VEHICLES FOR CONCRETE DELIVERY AND PLACEMENT SHALL BE ITEMIZED AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ANY WORK IN THE AREA.

A1

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	05–23–2013	AtP	CEW
01	BID SET	05–08–2013	AtP	CEW

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301 EAST HURON STREET
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

FOREST AVENUE IMPROVEMENT PROJECT
TRANSFORMER PARK
CONSTRUCTION PLAN

SCALE: PLAN: 1" = 10'

DRAWING No.
C011110612

SHEET No.
11 OF 17

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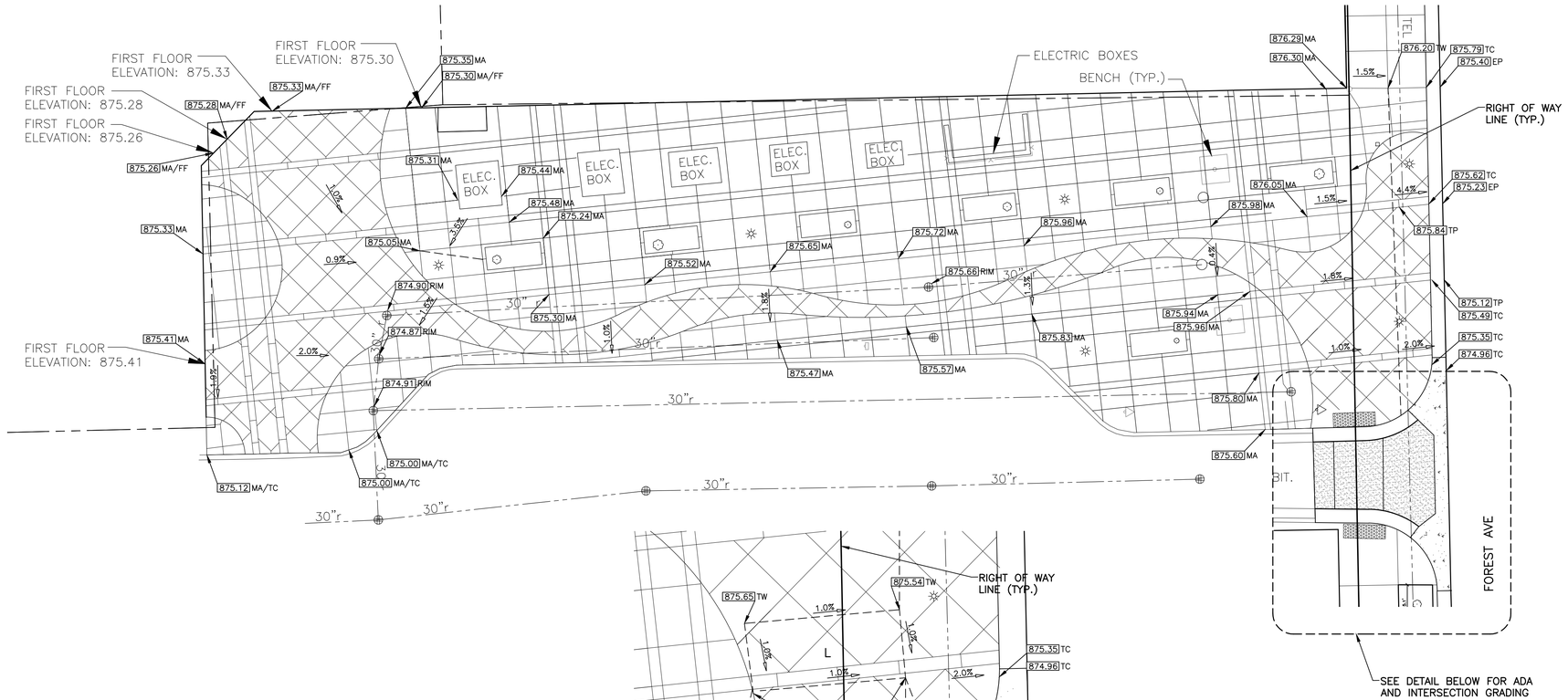

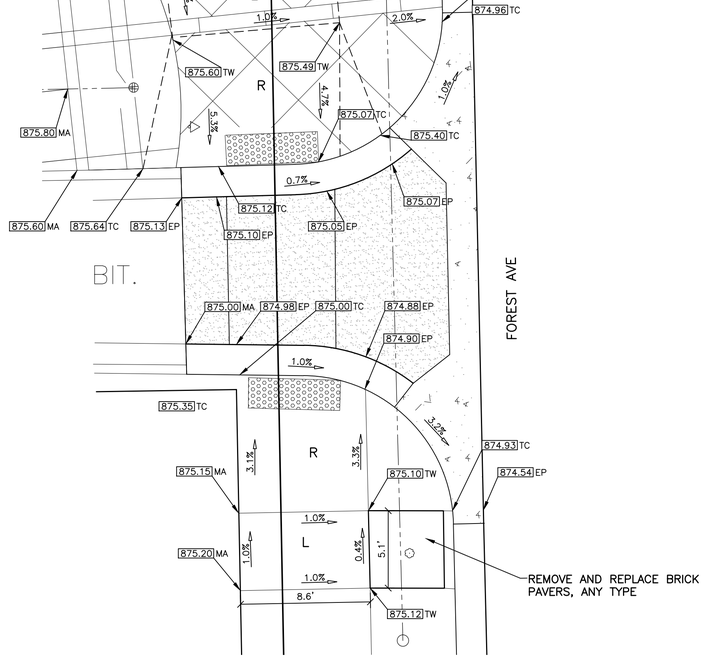

GRADING DETAIL
FOREST & ALLEY INTERSECTION
SCALE: 1" = 5'

GRADING LEGEND

xxx.xx	PROPOSED ELEVATION
X.XX%	PROPOSED SLOPE
TC	PROPOSED TOP OF CURB ELEVATION
TP	PROPOSED TOP OF PAVEMENT ELEVATION
EW	PROPOSED EDGE OF WALK ELEVATION
EM	PROPOSED EDGE OF METAL ELEVATION
HP	PROPOSED HIGH POINT ELEVATION
MA	MATCH EXISTING
FF	EXISTING FIRST FLOOR ELEVATION
EP	PROPOSED EDGE OF PAVEMENT
R	SIDEWALK RAMP
L	LEVEL LANDING AREA
	DETECTABLE WARNING CAST IN PLACE
	GRADE BREAK

BENCH MARKS

BENCHMARK: 867.50
RR SPIKE IN WEST FACE LIGHT POLE, EAST SIDE FOREST AVE, 130 FEET NORTH OF HILL ST.

BENCHMARK: 873.62
TOP OF SOUTHEAST CORNER OF FIRST STEP TO PARKING GARAGE, NORTHWEST QUAD OF FOREST AVE AND WILLARD ST.

NOTES

A 30-INCH REINFORCED CONCRETE PIPE DETENTION SYSTEM IS LOCATED BELOW GRADE AT TRANSFORMER PARK. COVER ABOVE PIPE IS LIMITED TO 1.5-FT. CONTRACTOR SHALL NOT UTILIZE ANY HEAVY EQUIPMENT IN THIS AREA. ALL REMOVAL AND CONSTRUCTION EQUIPMENT, AND VEHICLES FOR CONCRETE DELIVERY AND PLACEMENT SHALL BE ITEMIZED AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ANY WORK IN THE AREA. A1

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
01	BID SET	05-08-2013	ATP	CEW
02	ADDENDUM #1	05-22-2013	ATP	CEW

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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

FOREST AVENUE IMPROVEMENT PROJECT

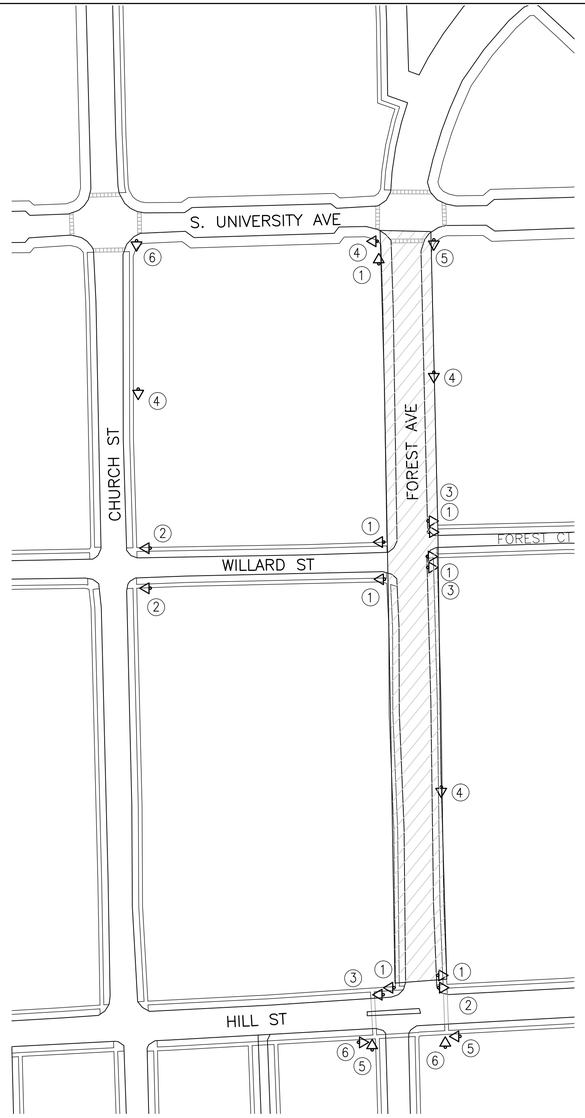
TRANSFORMER PARK

GRADING & DRAINAGE PLAN

SCALE PLAN: 1" = 10'

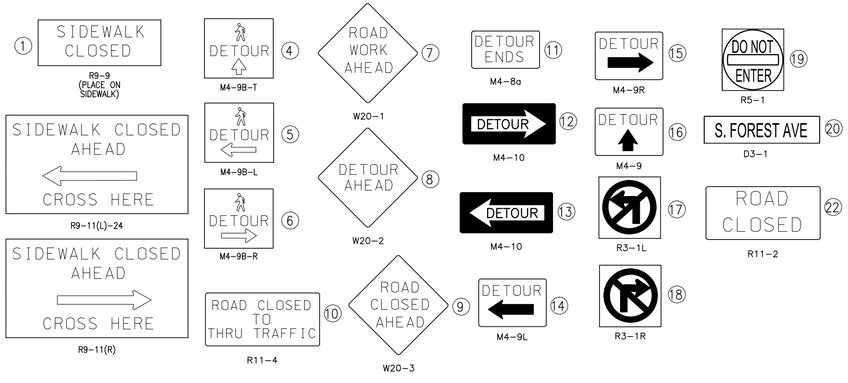
DRAWING No. C012110612

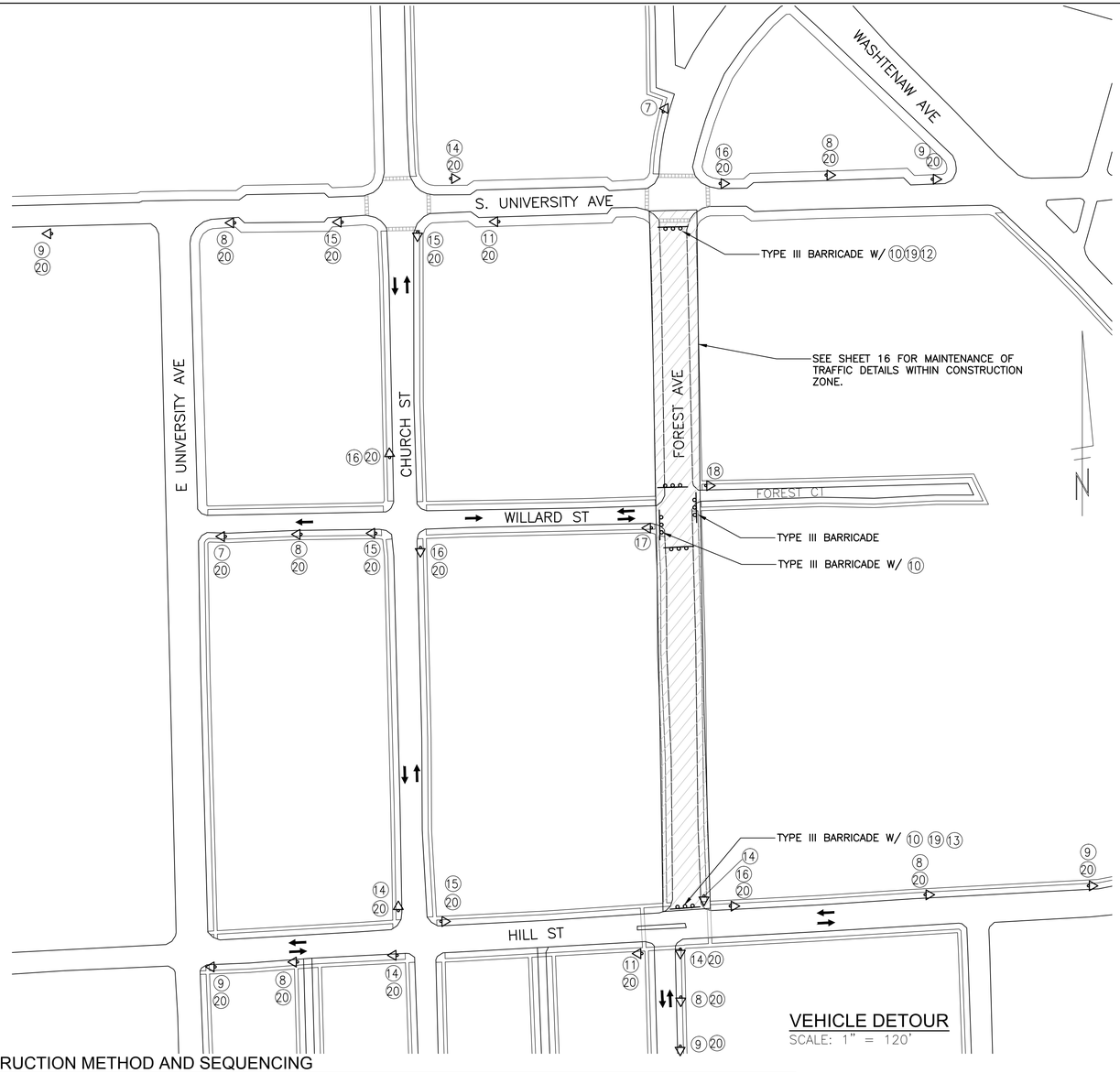
SHEET No. 12 OF 17



PEDESTRIAN DETOUR

SCALE: 1" = 120'





VEHICLE DETOUR

SCALE: 1" = 120'

CONSTRUCTION METHOD AND SEQUENCING

IT IS THE INTENT OF THE FOLLOWING SEQUENCE OF CONSTRUCTION TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE, SCHEDULE, AND OVERSEE ALL UTILITY RELOCATIONS AND ADJUSTMENTS. THE CONTRACTOR SHALL ACCOUNT FOR ALL SUCH EFFORT IN THE CONSTRUCTION SCHEDULE. ALL TEMPORARY OR PERMANENT PAVEMENT MARKINGS AND SIGNING SHALL BE IN PLACE BEFORE ANY PAVEMENT IS OPENED TO TRAFFIC. THE WORK TO BE COMPLETED ON THIS STREET SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING ITEMS. THE ORDER OF CONSTRUCTION SHALL BE AS GIVEN UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER.

1. IMPLEMENT TRAFFIC MAINTENANCE, AND SOIL EROSION CONTROLS IN ACCORDANCE WITH THE PLANS, AND AS DIRECTED BY THE ENGINEER.
2. PERFORM ALL REMOVALS AND TEMPORARY RESTORATIONS TO ALLOW ACCESS TO PROPERTIES ON FOREST AVE.
3. INSTALL PROPOSED 12-INCH WATER MAIN BETWEEN WILLARD AND HILL STREET.
4. AFTER SUCCESSFUL PRESSURE AND BACTERIOLOGICAL TESTING PER DETAILED SPECIFICATION, SCHEDULE AN APPROVED SHUT DOWN WITH CITY ENGINEER WITH A MINIMUM 3 DAYS NOTICE. CONNECT PROPOSED WATER MAIN TO SYSTEM AND ALL SERVICES TO BE COORDINATED WITH CITY.
5. PERFORM STONE RESERVOIR CONSTRUCTION AND STORM SEWER IMPROVEMENTS
6. BRING UP BASE COURSE MATERIAL. CONTRACTOR SHALL NOT LEAVE EXCAVATIONS OPEN OVER NIGHT.
7. INSTALL BMP STORM WATER STRUCTURES IN FOREST AVENUE.
8. PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, IN ACCORDANCE WITH THE PLANS, AND AS DIRECTED BY THE ENGINEER.
9. PERFORM PAVEMENT STRUCTURE INSTALLATION AND RELATED IMPROVEMENT IN INCREMENTS THAT ALLOW ACCESS TO PROPERTIES ON FOREST AVENUE PER PLANS, AND AS DIRECTED BY THE ENGINEER. CONTRACTOR SHALL NOT LEAVE EXCAVATIONS OPEN OVER NIGHT.
10. PAVE FOREST AVE USING SPECIFIED SECTION AND APPROVED PAVEMENT MIX. BETWEEN HMA LEVELING AND WEARING COURSES, CONTRACTOR SHALL ADJUST ALL STRUCTURE COVERS, MONUMENT BOXES, AND VALVE BOXES TO THEIR FINISHED GRADES.
11. COMPLETE ALL MISCELLANEOUS SIDEWALK AND CONSTRUCTION ITEMS, INCLUDING CLEAN-UP AND FINAL RESTORATION.
12. REMOVE ALL TRAFFIC CONTROL DEVICES. REMOVE MISS DIG FLAGS.

MAINTAINING TRAFFIC AND TRAFFIC CONTROLS

1. THE NECESSARY SIGNS AND SIGN SUPPORT STANDARDS, BARRICADES, AND TRAFFIC CONTROL DEVICES NECESSARY FOR THE PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AS APPROVED BY THE CITY OF ANN ARBOR. ALL SUCH DEVICES SHALL BE FURNISHED, INSTALLED, AND MAINTAINED BY THE CONTRACTOR.
2. REFER TO CITY SPECIFICATIONS FOR DETAILS ON MATERIALS, EQUIPMENT, AND CONSTRUCTION METHODS.
3. ALL POSTS TO BE DRIVEN INTO GROUND.
4. CONTRACTOR TO FIELD STAKE ALL SIGNS AND CONTACT CITY FOR REVIEW AND APPROVAL OF SIGN PLACEMENT PRIOR TO INSTALLATION.
5. ACCESS TO PARKING STRUCTURE AND CROSS ROADS MUST BE MAINTAINED AT ALL TIME. 2 DAYS NOTICE MUST PROVIDED BEFORE TEMPORARY CLOSURES.
6. BEGINNING AUGUST 15, 2013, THE CONTRACTOR SHALL BE REQUIRED TO DEMOBILIZE FROM THE PROJECT SITE; REMOVE ALL EQUIPMENT, MATERIALS, AND TRAFFIC CONTROL DEVICES; AND PERFORM ANY TEMPORARY PAVING, RESTORATION, AND PAVEMENT MARKINGS IN ORDER TO FULLY OPEN THE AREA TO VEHICULAR AND PEDESTRIAN TRAFFIC TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR MAY THEN RESUME CONSTRUCTION ACTIVITIES ON OR AFTER SEPTEMBER 3, 2013, FOLLOWING THE START OF UNIVERSITY OF MICHIGAN'S FALL ACADEMIC YEAR. ANY COSTS ASSOCIATED WITH THIS SHUT DOWN, RESTORATION, CLEAN UP, AND REMOBILIZATION PROCESS SHALL BE INCLUDED IN THE PAY ITEM "GENERAL CONDITIONS" AND WILL NOT BE PAID FOR SEPARATELY.
7. NO WORK SHALL BE DONE ON SATURDAYS DURING HOME UNIVERSITY OF MICHIGAN FOOTBALL GAMES.

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1 – ENTIRE SHEET	05-22-2013	AIP	CEW
01	BID SET	05-08-2013	AIP	CEW

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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

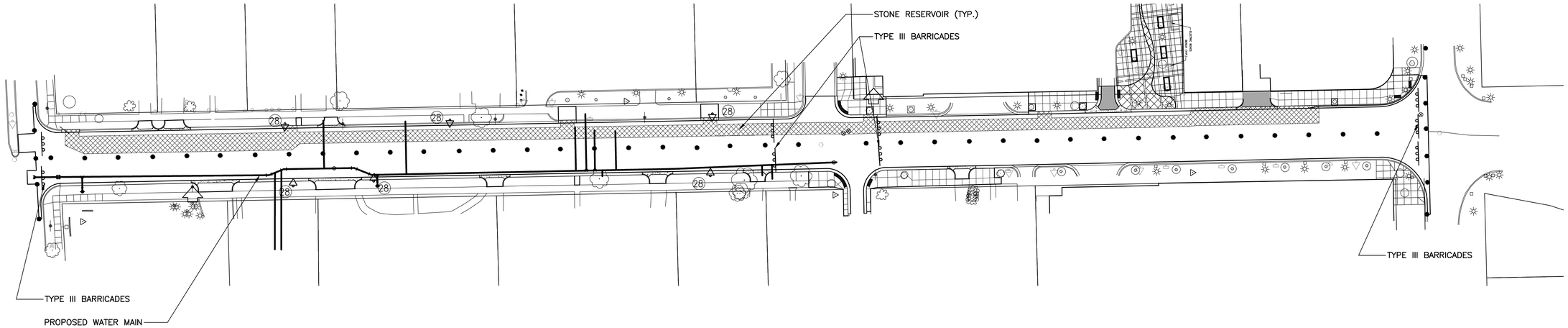
FOREST AVENUE IMPROVEMENT PROJECT

DETOUR PLAN

SCALE PLAN: 1" = 100'

DRAWING No. C0151106112

SHEET No. 15 OF 17



NO PARKING WORK ZONE (28)
R7-2A

LANE CLOSURE DETAIL

USE OF TRAFFIC REGULATOR OPERATIONS ARE ALLOWED GIVEN PERMISSION FROM THE ENGINEER. SUCH OPERATIONS SHALL COMPLY WITH THE MMUTCD AND CORRESPONDING FIGURE 6H-10.

TRFFIC CONTROL QUANTITIES

QTY.	TYPE	DESCRIPTION	SIZE	AREA	TOTAL AREA
26	D3-1	S FOREST AVE	12X36	3	78
7	R9-9	SIDEWALK CLOSED	30X18	3.75	26.25
3	R9-11L	SIDEWALK CLOSED - CROSS HERE	24X12	2	6
3	R9-11R	SIDEWALK CLOSED - CROSS HERE	24X12	2	6
3	M4-9B-T	PED DETOUR - THRU	30X30	6.25	18.75
3	M4-9B-L	PED DETOUR - LEFT	30X30	6.25	18.75
3	M4-9B-R	PED DETOUR - RIGHT	30X30	6.25	18.75
2	W20-1	ROAD WORK AHEAD	36X36	9	18
6	W20-2	DETOUR AHEAD	36X36	9	54
3	W20-3	ROAD CLOSED AHEAD	36X36	9	27
5	R11-4	ROAD CLOSED TO THRU TRAFFIC	30X60	12.5	62.5
2	M4-8A	DETOUR ENDS	18X24	3	6
1	M4-10R	DETOUR - RIGHT	18X48	6	6
1	M4-10L	DETOUR - LEFT	18X48	6	6
5	M4-9L	DETOUR - LEFT	30X24	5	25
4	M4-9R	DETOUR - RIGHT	30X24	5	20
4	M4-9	DETOUR - THRU	30X24	5	20
1	R3-1L	NO LEFT TURN	24X24	4	4
1	R3-1R	NO RIGHT TURN	24X24	4	4
2	R5-1	DO NOT ENTER	30X30	6.25	12.5
2	R11-2	ROAD CLOSED	30X48	10	20
14	R7-2A	NO PARKING*	18X12	1.5	21
2	W20-7A	FLAGGER	36X36	9	18
2	W3-4	BE PREPARED TO STOP	36X36	9	18
16	TYPE III	TYPE III LIGHTED BARRICADE			
70	TYPE II	LIGHTED DRUM			
2	PCMS	SIGN, PORTABLE CHANGEABLE MESSAGE, FURNISH AND OPERATE			
		*PROVIDED BY CITY			

LEGEND

- STONE RESERVOIR
- TYPE III BARRICADE
- PLASTIC DRUM, HIGH INTENSITY (25' SPACING)
- TEMP CONSTRUCTION SIGN

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1 – ENTIRE SHEET	05-22-2013	ATP	CEW
01	BID SET	05-08-2013	ATP	CEW

CITY OF ANN ARBOR
PUBLIC SERVICE
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734.794.6410
www.a2gov.org

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

FOREST AVENUE IMPROVEMENT PROJECT

TEMPORARY TRAFFIC CONTROL

SCALE PLAN: 1" = 40'

DRAWING No. C016110612

SHEET No. 16 OF 17