

THE SHOPPES ON WASHINGTON

NAPERVILLE, ILLINOIS

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SPECIFICATIONS, SPECIAL PROVISIONS, & GENERAL NOTES

GENERAL NOTES

- Definition of terms:
 - The CONTRACTOR is the individual, firm, partnership or corporation contracting with the OWNER for performance of the prescribed work.
 - The OWNER is the individual, firm, partnership or corporation having the authority to award the contract for the prescribed work.
 - The ENGINEER shall be the OWNER's representative, and/or the designated representative from the local jurisdictional agency having authority over the prosecution of the prescribed work.
- All CONTRACTORS shall be responsible for the following, which shall also be incidental to the cost of construction:
 - Examination of the Engineering Plans and Specifications prior to submitting a bid, and notifying the ENGINEER at once of any discrepancies.
 - The obtaining of any necessary permits not previously applied for by the OWNER, and posting of the necessary bonds.
 - The notification of the start of construction to all jurisdictional agencies, utility companies, and the ENGINEER, at least two (2) working days prior to said start.
 - Calling attention to the OWNER of any errors or discrepancies which may be suspected on lines and grades which are established by the OWNER. The CONTRACTOR shall not proceed with the work until the lines and grades which are believed to be in error have been verified or corrected by the OWNER. Additional stating that may be required due to CONTRACTORS negligence, shall be paid for by the CONTRACTOR.
 - The providing of safe and healthful work conditions throughout the prosecution of the construction work. This shall include, but not be limited to: the removal of debris, the protection of construction hazards with barricades, and the keeping of public street pavement clean of construction dirt and debris.
 - The restoration to the original condition or better of any off-site areas that are damaged by CONTRACTOR during construction.
 - The testing of materials, if required by the jurisdictional agencies.
 - The guarantee of all materials and workmanship for a period of one (1) year upon final acceptance by the OWNER and the jurisdictional agencies.
- Construction equipment and/or materials shall not be stored within the right of way at any time.
- The existing and new pavement shall be kept free of debris at all times.

- "The CONTRACTOR shall not conduct any generation, transportation, or recycling of construction or demolition debris, clean or general or un-contaminated soil generated during construction, remodeling, repair, and demolition of utilities, structures, and roads that is not commingled with any waste, without the maintenance of documentation identifying the hauler, generator, place of origin of the debris or soil, the weight or volume of the debris or soil, and the location, owner, and operator of the facility where the debris or soil was transferred, disposed, recycled or treated. This documentation must be maintained by the CONTRACTOR for 3 years."
- The OWNER shall be responsible for the following:
 - Scheduling the necessary pre-construction meeting(s) with the jurisdictional agencies with all SUB-CONTRACTORS present.
 - Providing the CONTRACTOR with one (1) set of control line and grade stakes (at offsets mutually agreed upon) for the proper prosecution and control of the work.
- The ENGINEER shall be responsible for the following:
 - To visit the construction site in order to better carry out the duties and responsibilities assigned by the OWNER and undertaken by the ENGINEER. The ENGINEER shall not, during such visits or as a result of such observations of the CONTRACTOR(S)' work in progress, supervise, direct have control over the CONTRACTOR(S)' work nor shall the ENGINEER have authority over the responsibility for the means, methods, techniques, sequences or procedures of construction selected by the CONTRACTOR(S), for safety precautions and programs incident to the work of the CONTRACTOR(S), or for any failure of the CONTRACTOR(S) to comply with laws, rules, regulations, ordinances, codes or orders applicable to the CONTRACTOR(S) furnishing and performing their work. Accordingly, the ENGINEER can neither guarantee the performance of the construction contracts by the CONTRACTOR(S) nor assume responsibility for the CONTRACTOR(S)' failure to furnish and perform their work in accordance with the Contract Documents.

GENERAL SPECIFICATIONS

- The General Specifications which apply to the construction work as shown on the Engineering Plans, are contained in the following documents:
 - Standard Specifications for Road and Bridge Construction as adopted April 1, 2016 by the State of Illinois, Department of Transportation.
 - Supplemental specifications and recurring special provisions by the State of Illinois, Department of Transportation, latest edition.
 - Standard Specifications for Water and Sewer Main Construction in Illinois, as adopted June 2014 by the Illinois Society of Professional Engineers, et al.
 - Standards and Specifications of the City of Naperville, current addition.
 - The Illinois Urban Manual dated 1995 (as amended) prepared by USDA, NRCS for IEPA, Division of Water Pollution Control.
 - City of Naperville Design Manual for Public Improvements.

- In the event of conflict between statements within the Special Provisions, General Notes, Notes and Details on the engineering plans and General Specifications, the most stringent shall govern.

SPECIAL PROVISIONS

1. EARTHWORK IMPROVEMENTS

a. Earth Excavation

- Excavation of earth and other materials which are suitable for use as structural fill. The excavation shall be to within the tolerance of 0.3 feet (plus or minus) of the plan sub-grade elevations. The (plus or minus) tolerance within pavement areas shall be such that the earth material shall "balance" as part of the fine grading operation.
- Placement of the earth and other suitable materials shall be within those areas requiring structural fill in order to achieve the plan sub-grade elevations to within a tolerance of 0.3 feet (plus or minus). The fill material shall be placed in loose lifts that shall not exceed eight (8) inches in thickness, and the water content shall be adjusted in order to achieve the required compaction. Earth material may be placed within those portions of the building site not requiring structural fill, to within six (6) inches of the plan finished grade elevation. In areas requiring structural fill, however, the earth material shall not be placed over topsoil or other unsuitable materials unless specifically directed by the Soils ENGINEER with the concurrence of the OWNER.

- Compaction of the earth and other suitable materials, shall be to at least 95% of the Modified Proctor Dry density, ASTM 698, within proposed pavement and building areas. Moderate (90%) compaction is required elsewhere.
- Excess materials, if not utilized as fill, shall be completely removed from the construction site and disposed of by the CONTRACTOR.

b. Unsuitable Material

- Unsuitable material shall be considered as material which is not suitable for the support of pavement and building construction, and is encountered below normal topsoil depths and the proposed sub-grade elevation. The decision to remove said material, and to what extent, shall be made by a Soils ENGINEER with the concurrence of the OWNER.

c. General

The Grading CONTRACTOR shall:

- Maintain proper site drainage at all times during the course of construction, and prevent storm water from running into or standing in excavated areas.
- Spread and compact uniformly to the degree specified all excess trench spoil after completion of the underground improvements. (Earthwork CONTRACTOR to make appropriate adjustments in his rough grading to accommodate trench spoil).
- Scarfify and compact to the degree specified the upper twelve (12) inches of the suitable sub-grade material, in all areas that may be soft due to excess moisture content. This applies to cut areas as well as fill areas.
- Provide water to add to dry material in order to adjust the moisture content for the purpose of achieving the specified compaction.
- Backfill the curb and gutter after its construction and prior to the placement of the base course material.

d. Testing and Final Acceptance

- The CONTRACTOR shall provide as a minimum, a fully loaded six-wheel truck for proof rolling the pavement sub-grade prior to the placement of the curb and gutter and the base material.
- Specific compaction testing may be required by the OWNER in selected fill areas. The CONTRACTOR shall bear the cost of compaction testing as well as the responsibility for the necessary correction(s).
- Approval of the pavement sub-grade by the jurisdictional agency shall be required prior to the placement of the pavement materials.

e. Method of Measurement

- As-built measurements of earthwork for the purpose of payment shall not apply. The quantities shown in the ENGINEER'S "Quantity Estimate" shall be utilized unless said quantities are adjusted by mutual consent of the OWNER and CONTRACTOR.
- The quantities as shown in the ENGINEER'S "Quantity Estimate" are those estimated by the ENGINEER and are provided solely for the convenience of the CONTRACTOR. The CONTRACTOR by choosing to utilize these quantities in the preparation of his "lump sum" bid, also accepts their accuracy. The CONTRACTOR is therefore encouraged to make his own independent earthwork calculation, and to visit the site.
- Prior to the removal of unsuitable material, the CONTRACTOR shall notify the OWNER for authorization to remove said material. Upon authorization and removal, the unsuitable material shall be field measured by the ENGINEER in place.

f. Basis of Payment

- Payment for all earthwork shall be "lump sum". The CONTRACTOR shall provide unit prices for earthwork for the purpose of contract adjustment, if required.
- Payment for the removal of unsuitable material shall be based on the quantities as field measured by the ENGINEER. The CONTRACTOR shall provide as part of his bid a unit price per CUBIC YARD for the removal of unsuitable material. Said unit price shall include the complete removal of the material, replacement with a suitable material obtained by the CONTRACTOR from a borrow source, and compaction to the required specification.

2. PAVING IMPROVEMENTS

a. Fine Grading

- Prior to the construction of the curb and gutter and the placement of the base material, the streets shall be fine graded to within 0.1 feet plus or minus of final sub-grade elevation, to a point two (2) feet beyond the back of curb.

b. Curb and Gutter

- The curb and gutter shall be the type as detailed on the Engineering Plans.
- The curbs shall be backfilled after their construction and prior to the placement of the base course.

c. Pavement

- The pavement material shall be as detailed on the Engineering Plans.

d. General

The Paving CONTRACTOR shall:

- Repair any base course and binder course failures prior to the installation of the final bituminous concrete surface course.
- Sweep clean the binder course prior to the installation of the final bituminous concrete surface course. Excessive cleaning of the binder course that may be required, and is not the fault of the Paving CONTRACTOR, shall be paid for on a time and material basis by prior agreement with the OWNER.
- Testing and Final Acceptance
 - Prior to placement of the base course within the public right of way, the sub-grade must be approved by the jurisdictional authority. (See "Testing and Final Acceptance for Earthwork")
 - Prior to placement of the bituminous concrete surface course, the CONTRACTOR, when required, shall obtain specimens of the binder course with a core drill where directed, for the purpose of thickness verification, in accordance with the General Specification entitled, "Standard Specification for Road and Bridge Construction", ART.406.16.
- Final acceptance of the total pavement installation shall be subject to the testing and checking requirements cited above.

3. UNDERGROUND IMPROVEMENTS

a. Sanitary Sewer Mains and Services

- Material** shall be PVC sewer pipe, which shall meet or exceed the performance requirements of ASTM D-2241 SDR 26.
- Joints** shall be compression type, ASTM D-3139.
- Bedding** shall be constructed with 1/4 inch to 3/4 inch size crushed stone, with a minimum thickness of twelve (12) inches above the crown of the pipe. See trench section detail on plans. (Class I, ASTM D-2321) (CA-11)
- Cover** over the pipe shall be a minimum of five (5) feet.
- Slope** for an 8 inch diameter pipe shall be a minimum of 0.40%. For a 6 inch diameter pipe, a minimum of 1.0%.
- Wyes or Tees** shall be provided on the new sanitary sewers for proposed building services. All connections to existing sanitary sewers not having wyes shall be made with a "sleeve top" for building services and with a manhole for sewer extensions. All tops shall include a properly installed hub wye saddle.
- "Band Seal"** or similar coupling shall be used when joining pipes of dissimilar materials.
- Services** shall extend five (5) feet inside the property line of a lot being served (single family development), or to within the (5) feet from the face of a proposed building being served (multi-family and commercial development). The termination points shall be clearly located with a green-topped 4 inch x 4 inch stake.
- Size** shall be as indicated on the Engineering Plans.
- Polyethylene Encasement** all D.I.P. not enclosed in steel casing pipe shall be encased in polyethylene conforming to AWWA C-105-99.

b. Water Main and Services

- Material** for the water main shall be ductile iron pipe, which shall meet or exceed the performance requirements of ASA A21.51, Class 52 cement-lined. Water service material shall be type "K" copper.
- Joints** for the ductile iron pipe shall be the push-on (bell-type) type, which shall meet or exceed ASA A21.51 (AWWA C111). All valve and fittings shall be mechanical joints with retainer glands, which shall meet or exceed ASA A21.10 (AWWA C110). Retainer glands that are installed to restrain valves, fittings, hydrants and pipe joints shall be MEGALUG 1100 Series as manufactured by EBAA Iron, Inc., or Uni-Flange Blockbuster 1400 Series from Ford Motor Box Co. over the pipe shall be a minimum of 5 feet.
- Cover**
- Polyethylene Encasement** all D.I.P. not enclosed in steel casing pipe shall be encased in polyethylene conforming to AWWA C-105-99.
- Services** shall extend five (5) feet inside the property line of a lot being served (single family development), or to within five (5) feet from the face of a proposed building being served (multi-family or commercial development), except where noted otherwise on the plans. The termination points shall be clearly located with a blue-topped 4 inch x 4 inch stake.
- Size** shall be as indicated on the Engineering Plans.
- Storm Sewer**
 - Material and Joints** See TED Business Group Standard Construction Plan Notes for Development Projects.
 - Size** Shall be as indicated on the Engineering Plans.
- Trench Backfill Material**
 - All trenches under or within 2' of an existing or proposed sidewalk, curb, pavement, or driveway are to be backfilled with trench backfill, material consisting of CA-6 aggregate.
- Incidental to Construction**

The Underground CONTRACTOR shall:

 - Adhere to the criteria for the separation between water mains and the storm and sanitary sewer lines as described in the "Technical Policy Statement", Division of Public Water Supplies, Illinois Environmental Protection Agency.
 - Be responsible to place on grade, and coordinate with other CONTRACTORS, all underground utility structure frames such as manholes, catch basins, and inlets.
 - Be aware of potential conflicts with existing utilities. The CONTRACTOR shall excavate around the existing utilities to determine their exact location and elevation prior to the construction of the proposed utility improvements.
 - Provide poured concrete filets conforming to the shape of the pipe in all sanitary and storm manholes, and inlets.
 - Be responsible for maintaining the top of any utility trench at least two (2) feet away from any existing or proposed curb or pavement, in those instances where the trench runs parallel to said curb or pavement.
 - Be responsible for the de-watering of utility trenches during construction and providing the necessary trench bracing that may be required in order to adhere to the current OSHA safety standards.
 - Remove soil materials that may be encountered at the pipe invert elevation to a depth of at least (1) foot below the bottom of the pipe, and backfill with compacted bedding material.
 - Not damage the road sub-grade with excessive water saturation from hydrant flushing, or from leaks in the water distribution system. The cost of repair for such damage shall be borne by the CONTRACTOR. Hoses should be used to direct the water from hydrant flushing into the storm sewer system (if available).
 - Repair any existing drainage tiles damaged during construction and properly re-route and/or connect said tile to the nearest storm sewer outlet. All locations of encountered drainage tile shall be properly indicated on the CONTRACTOR'S "As-Built" drawing.

d. Trench Backfill Material

- All trenches under or within 2' of an existing or proposed sidewalk, curb, pavement, or driveway are to be backfilled with trench backfill, material consisting of CA-6 aggregate.
- The quantities as shown in the ENGINEER'S "Quantity Estimate" are those estimated by the ENGINEER and are provided solely for the convenience of the CONTRACTOR. The CONTRACTOR by choosing to utilize these quantities in the preparation of his "lump sum" bid, also accepts their accuracy. The CONTRACTOR is therefore encouraged to make his own independent earthwork calculation, and to visit the site.

e. Incidental to Construction

- The Underground CONTRACTOR shall:
 - Adhere to the criteria for the separation between water mains and the storm and sanitary sewer lines as described in the "Technical Policy Statement", Division of Public Water Supplies, Illinois Environmental Protection Agency.
 - Be responsible to place on grade, and coordinate with other CONTRACTORS, all underground utility structure frames such as manholes, catch basins, and inlets.
 - Be aware of potential conflicts with existing utilities. The CONTRACTOR shall excavate around the existing utilities to determine their exact location and elevation prior to the construction of the proposed utility improvements.
 - Provide poured concrete filets conforming to the shape of the pipe in all sanitary and storm manholes, and inlets.
 - Be responsible for maintaining the top of any utility trench at least two (2) feet away from any existing or proposed curb or pavement, in those instances where the trench runs parallel to said curb or pavement.
 - Be responsible for the de-watering of utility trenches during construction and providing the necessary trench bracing that may be required in order to adhere to the current OSHA safety standards.
 - Remove soil materials that may be encountered at the pipe invert elevation to a depth of at least (1) foot below the bottom of the pipe, and backfill with compacted bedding material.
 - Not damage the road sub-grade with excessive water saturation from hydrant flushing, or from leaks in the water distribution system. The cost of repair for such damage shall be borne by the CONTRACTOR. Hoses should be used to direct the water from hydrant flushing into the storm sewer system (if available).
 - Repair any existing drainage tiles damaged during construction and properly re-route and/or connect said tile to the nearest storm sewer outlet. All locations of encountered drainage tile shall be properly indicated on the CONTRACTOR'S "As-Built" drawing.
- Maintain proper site drainage as established by the earthwork CONTRACTOR to assure the integrity of the roadway sub-grade.
- Remove all excess materials to locations designated by the OWNER.
- Furnish one (1) set of Record Drawings to the ENGINEER upon completion of the sanitary sewer and water mains. Drawings shall show the location of all sanitary sewer wyes (measured from the nearest downstream manhole), hydrants, valves, fittings, and individual service boxes.
- Provide inlet filter baskets beneath all open lid structures to minimize intrusion of debris into the storm sewer system.
- Any existing utility structures requiring adjustment or reconstruction shall be completed by the CONTRACTOR to the satisfaction of the utility owner. Adjustments and/or reconstructions not called for on the plans shall be considered incidental to the contract. No more than a total of 12 inches of adjusting rings and/or 2 adjusting rings shall be allowed.

- Existing watermain valves shall only be operated by the City of Naperville CEE and CM Division with 48 hour notice (Monday-Friday).
- Operation-New watermain valves, including pressure tap valves, adjacent to an existing watermain, and existing watermain valves shall be operated by the City of Naperville CEE and CM Division personnel with 48 hour notice (Monday-Friday).

f. Testing and Final Acceptance

- Sanitary sewer mains and services shall be tested for leakage and deflection in accordance with the requirements of the "Standard Specifications for Water and Sewer Main Construction in Illinois" unless local requirements are more restrictive. Allowable testing limits shall be as described in the "General Specifications" unless the local requirements are more restrictive. Service stubs must be properly plugged and sealed and clearly located at their termination points prior to testing. All sewer mains, service lines, and manholes shall be clean and free of debris prior to their final acceptance as outlined in the EPA's Section 370.3306(2). Leakage testing of all manholes for water tightness shall be in accordance with ASTM C696-94: "Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines". Vol. 04.05, Chemical Resistant Materials, Vitrified Clay, Concrete, Fiber-Cement Products; Mortars; Masonry (1996) (no later editions or amendments) or ASTM C1244-93 "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test", Vol. 04.05 Chemical Resistant Materials, Vitrified Clay, Concrete, Fiber-Cement Products; Mortars; Masonry (1996) (no later editions of amendments) prior to placing into service.
- Storm sewer and all storm structures shall be clean and free of debris prior to their final acceptance.
- Water main shall be tested in accordance with the local jurisdictional requirements prior to its final acceptance. The pressure and leakage tests and disinfection of the mains shall be as described in the "General Specification" unless the local requirements are more restrictive. All valve vaults shall be clean and free of debris and water, the individual service boxes shall be visible and clearly located prior to their final acceptance.

4. PROTECTION OF WATERMAIN AND WATER SERVICE LINES

Watermains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows:

a. Watermains

- Horizontal Separation:**
 - Water mains shall be laid at least ten (10) feet horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.
 - Water mains may be laid closer than ten (10) feet to a sewer line when:
 - Local conditions prevent a lateral separation of ten feet;
 - The water main invert is at least 18 inches above the crown of the sewer; and
 - The water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
- Both the water main and drain or sewer shall be constructed of slip-on mechanical joint cast or ductile iron pipe, or PVC pipe, SDR 26 meeting the requirements for watermain. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling.
- Vertical Separation:**
 - It is impossible to obtain the proper vertical separation as described in (a) above, the water main passes under a sewer or drain.
 - A vertical separation of 18 inches between the invert of the sewer or drain and the crown of the watermain shall be maintained where a watermain crosses under a sewer. Support the sewer or drain lines to prevent settling and breaking of the watermain.
 - Construction shall extend on each side of the crossing until the normal distance from the watermain to the sewer or drain line is at least ten (10) feet.

b. Water Service Lines:

- The horizontal and vertical separation between water service lines and all storm sewers, sanitary sewers, combined sewers or any drain or sewer service connection shall be the same as watermain separation described in (a) above.
- Water pipe described in (a) above shall be used for sewer service lines when minimum, horizontal and vertical separation cannot be maintained.
- Special conditions - Alternate solutions shall be presented to the IEPA when extreme topographical, geological or existing structural conditions make strict compliance with (a) or (b) above technically and economically impractical. Alternate solutions will be approved provided watertight construction structurally equivalent to approved watermain material is proposed.
- Watermains shall be separated from septic tanks, disposal fields and seepage beds by a minimum of 25 feet.
- Watermains and water service lines shall be protected against entrance of hydrocarbons through diffusion through any material used in construction of the line.
- The CONTRACTOR shall have the option of providing a steel sleeve (sch.40 pipe) for the watermain being protected or replacing the sewer with watermain quality pipe as noted above. Only ductile iron pipe, 50 may be used with paved areas. Either ductile iron pipe or PVC watermain (SDR 26) may be used within landscaped areas. Measurement will be made in lineal feet for the diameter of sewer being replaced regardless of whether the CONTRACTOR elects to sleeve the watermain. No deduction in length of the normal sewer pipe materials will be made. Payment for watermain protection shall include all incremental costs of substitute materials, and additional labor, fittings, etc. necessary to complete the work as specified. Steel sleeves shall have exterior bituminous coating and waterproof bulkheads at each end. All sleeves to be filled with sand or pea gravel.

5. TRAFFIC CONTROL AND PROTECTION

- All work conducted within public right-of-ways shall be governed by the following specifications for traffic control. Traffic Control shall be in accordance with the applicable articles of section 107 and 700 of the "Standard Specifications for Road and Bridge Construction", the latest edition of the Illinois Manual on Urban Traffic Control Devices for Streets and Highways" and special details of Illinois Highway Standards listed herein.
- Special attention is called to articles 107.09 of the Standard Specifications and the following highway standards, details and supplemental specifications and mimeographed special provisions contained herein, relating to traffic control.
- The CONTRACTOR shall contact the local agency at least 72 hours in advance of beginning work.

Standards	701501, 701502, 701602, 701606, 701801, 701901
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- At the pre-construction meeting the CONTRACTOR shall furnish the name of the individual in his direct employ who is to be responsible for the installation and maintenance of the traffic control for this project. If the actual installation and maintenance are to be accomplished by SUB-CONTRACTOR, consent shall be requested of the ENGINEER at the time of the pre-construction meeting in accordance with Article 108.01 of the Standard Specifications. This shall not relieve the CONTRACTOR of the foregoing requirement for a responsible individual in his direct employ to supervise this work. The CONTRACTOR will provide the name of its representative who will be responsible for the administration of the traffic control plan.

- This item of work shall include furnishing, installing, maintaining, relocating and removing all traffic control devices used for the purpose of regulating, warning or directing traffic during the construction or maintenance of this improvement.
- Traffic control and protection shall be provided as called for in the plans, these special provisions, applicable highway standards, applicable sections of the standard specifications, or as directed by the ENGINEER.
- The CONTRACTOR shall be responsible for the proper location installation, and arrangement of all traffic control devices. Special attention shall be given to advance warning signs during construction operations in order to keep lane assignment consistent with barricade placement at all times. The CONTRACTOR shall cover all traffic control devices which are inconsistent with detour or lane assignment patterns during the transition from one construction stage to another.

- The CONTRACTOR shall coordinate all traffic control work on this project with adjoining or overlapping projects, including barricade placement necessary to provide a uniform traffic detour pattern. When directed by the ENGINEER, the CONTRACTOR shall remove all traffic control devices which were furnished, installed and maintained by him under this contract, and such devices shall remain the property of the CONTRACTOR. All traffic control devices shall remain in place until specific authorization for relocation or removal is received from the ENGINEER.
- The CONTRACTOR shall ensure that all traffic control devices installed by him are operational 24 hours a day, including Sundays and Holidays.
- Any drop off greater than three inches, but less than six inches within eight feet of the pavement edge shall be protected by Type I or II barricades equipped with mono-directional steady burn lights at 100 foot center to center spacing. If the drop off within eight feet of the pavement edge exceeds six inches, the barricades mentioned above shall be placed at 50 foot center to center spacing. Barricades that must be placed in elevated areas shall be installed with the top of the barricade in compliance with the height requirements of standard 701901. Vertical panel or other delineating devices may be substituted for Type I or II barricades with the approval of the ENGINEER.

- This item of work will be measured on a lump sum basis for furnishing, installing, maintaining, relocating and removing the traffic control devices required in the plans and these special provisions. Payment for traffic control and protection shall be considered as included in the work being done or as specified in the contract.

CITY OF NAPERVILLE -- DEPARTMENT OF PUBLIC UTILITIES -- WATER/WASTEWATER GENERAL NOTES

- New water main valves, including pressure tap valves, adjacent to an existing water main, and existing water main valves shall only be operated by the City of Naperville, Department of Public Utilities CEE/CM Division personnel with 48-hour notice (Monday-Friday). Contact Naperville TED Business Group at 630-420-6082 for scheduling.
- Any existing utility structures requiring adjustment or reconstruction shall be completed by the contractor to the satisfaction of the utility owner. Adjustments and/or reconstructions not called for on the plans shall be considered incidental to the contract. No more than a total of 12 inches of adjusting rings and/or 2 adjusting rings shall be allowed. All structure frames shall be flush with final grade.
- Trees shall be installed a minimum of five (5) feet horizontally from underground electrical feeders, sanitary sewers, sanitary services, water mains, and water services. Trees shall be installed a minimum of ten (10) feet horizontally from utility structures and appurtenances, including, but not limited to, manholes, valve vaults, valve boxes and fire hydrants. No trees, shrubs or obstacles will be allowed 10' in front of, 5' on the sides, and 7' to the rear of the electrical transformer.
- All retainer glands when required to restrain valves, fittings, hydrants, and pipe joints shall be mechanical joint wedge action type MEGALUG 1100 Series or as manufactured by EBBA Iron, Inc. or UNI-FLANGE BLOCKBUSTER 1400 SERIES as manufactured by Ford Motor Box Co. and shall be for use on ductile iron pipe conforming to ANSI/AWWA C151/A21.51, for nominal pipe sizes 3 through 48".
- Existing ductile iron systems for restraining push-on pipe bells shall be MEGALUG SERIES 1100HD or FORD SERIES 1390.
- Existing ductile iron systems requiring restraint shall be MEGALUG SERIES 1100SD (split bell) or MEGALUG SERIES 12241. Greater than 12" shall be fabricated.
- Ductile iron water main to be Class 52. All ductile iron pipe is to be encased in polyethylene film Polyethylene encasement to be installed in accordance with ANSI/AWWA C105/A21.5-05.
- Set of as-bid drawings shall be given to the City of Naperville upon completion of improvements showing the elevation and location (tied to two points) of all new and existing structures including fire hydrants, valve boxes and vaults, linestop sleeves, water service corporation stops, water main fittings/bends, manholes, sanitary service wyes (measured from downstream manhole), and abandoned water or sanitary sewer lines. All elevations should be referenced to the same benchmark datum as the original design plans. Horizontal ties shall be referenced to lot lines, back of curb, or property corners.
- All sanitary sewer piping shall be PVC pipe meeting the requirements of ASTM D-2241 with joints conforming to ASTM D-3139. All sanitary sewer fittings shall be PVC meeting the following requirements: 4" to 12" shall be Injection Molded Fittings meeting ASTM D-2241. Greater than 12" shall be Fabricated Fittings meeting ASTM D-2241 or C905. Minimum pressure rating shall be 150 psi.
- The valves less than 16" shall be standard pattern, gate valves and shall have the name or mark of the manufacturer, size and working pressure plainly cast in raised letters on the valve body. Valves may be approved from one of the following manufacturers: American, Clow, Waterous or Kennedy.
- Stainless steel nuts, bolts, T-bolts, and washers, Type 304 or better, will be required on all water main installations. This would apply to hydrants, tapping sleeves, valves, fittings, restraint, and other appurtenances buried or in valve vaults. Mechanical joints and restraint glands require stainless steel T-bolts. An anti-seize compound shall be factory applied to nuts and bolts - any damage to this coating shall be repair with field applied approved anti-seize compound that is a molybdenum-base lubricant, Bostik Never-Seize or approved equal.
- The contractor shall rotate and/or adjust any existing and/or new hydrant to the satisfaction of the Department of Public Utilities.
- Water mains shall be subjected to a hydrostatic/leakage test in accordance with Naperville Standard Specifications. Test pressure shall be no less than 150 psi for a period of 4 hours and not vary by more than + 5 psi, during the test. The test gauge shall be approved by the City and shall be glycerin or oil filled, with a range of no more than 200 psi and a range not greater than 10 psi, 4" minimum dial size. Water recovery test shall be completed at the end of the testing period to show actual leaking and that the water main did not have too much trapped air in the tested section.
- The City of Naperville DPU-W/WWW does not guarantee that any valve or fitting in the existing water distribution system will hold against a hydrostatic/leakage test. The Contractor is solely responsible for providing an acceptable pressure test which shall include provisions around existing valves and fittings.
- Fire hydrant should be bagged "NOT IN SERVICE" until all testing and disinfection has been completed and new water main section is service.
- Sanitary sewer and water shall be constructed, tested, and placed into service in accordance with City of Naperville Standard Specification and Specifications for Water and Sewer Main Construction in Illinois, Latest Edition.
- All valve boxes, vaults, hydrants, and manholes shall not be covered with construction debris and shall remain accessible to the respective utility company.
- Water service line smaller than 3" shall be type K copper. If joints are required due to length of service, then only compression type coupling shall be permitted. No soldered or flared type joints are allowed.
- All sanitary manholes shall be tested for leakage by vacuum testing. The manhole frame and adjusting rings shall be in place when testing. Any leaks shall be repaired from exterior of manhole - patching inside of manhole shall not be acceptable. A vacuum of 10" (254 mm) Hg shall be place on the manhole and the time shall be measured for the vacuum to drop to 9" (229 mm) Hg. The vacuum shall not drop below 9" (229 mm) Hg for the following time periods for each size of manhole:
 - 48-inch diameter - 60 seconds
 - 60-inch diameter - 75 seconds
 - 72-inch diameter - 90 seconds
 - 84-inch diameter - 105 secondsAny manholes that fail the test shall be sealed and re-tested until acceptable.
- The contractor shall provide internal televised inspection of all installed sanitary sewer, laterals, manholes and connections to the public system. Following completion of televising work, the contractor shall submit video recordings on DVD or flash drive along with a comprehensive televising report which will indicate the location, footages and nature of any defects. All defects shall be repaired to the satisfaction of the Water/Wastewater Utility and re-televised.
- Contractor work hours are only allowed from 7:00 a.m. to 5:00 p.m., Monday through Saturday. No work shall be permitted on Sundays.
- Sanitary pipes with less than 4 feet or more than 25 feet of cover shall be constructed of ductile iron piping (Class 50, minimum) and encased in polyprop.
- All excavations more than 20 feet deep must be protected by a system designed by a registered professional engineer.
- Contractor shall maintain 2' minimum clearance between existing utilities and new foundations and underground facilities. In areas where foundations and underground facilities are proposed adjacent to existing utilities, the contractor shall not hole by vacuum excavation or hand excavation to locate the existing utility to verify minimum clearance requirement.
- Fences shall be installed a minimum of 5 feet from any water or sanitary mains when running parallel with them. Where fences are installed crossing water or sanitary mains, the posts shall be located to have the main between them.
- All brass components shall be certified to be lead free in compliance with NSF 61 and NSF 372 and identified with applicable markings.

OTHER NOTES:

- Manholes shall be furnished with a self-sealing frame and solid cover (Neenah Foundry R-1772-CVH, East Jordan Iron Works 1022-3, or equal approved by the City Engineer). Contact Naperville TED Business Group on the cover in raised letters (see Standard Detail SAN 3). Frames and lids shall meet or exceed AASHTO H-20 loading specifications.
- Both the manhole frame and cover shall have machined horizontal and vertical bearing surfaces. Inverted manhole frames are not allowed.
- Pick holes shall not create openings in the manhole cover.
- Bolt-down frames and covers shall be Neenah Foundry R-1916-F1, East Jordan Iron Works 1040 ZPT or equal approved by the City Engineer. Frames are to be bolted to cone. Bolt-down frames shall be used where indicated on the plans.
- Manhole frames shall be adjusted to proper grade using reinforced, precast concrete or fiberized rings. Brick or concrete blocks will not be allowed. Fiberized adjusting rings shall be required when frame will be with a roadway area. Final frame adjustment for manholes within the roadway area shall be in accordance with Sections 602 and 603 of Standard Specifications for Road and Bridge Construction, prepared by the Illinois Department of Transportation, latest edition.
- All manhole frames and adjusting rings shall be securely sealed to the cone section or top barrel section of the manhole using resilient, flexible, non-hardening, preformed bituminous mastic material, Consol 102 B or approved equal. The mastic shall be applied in such a manner that no surface water or ground water inflow can enter the manhole through gaps between the top barrel section or cone section and the first adjusting ring, between adjusting rings, or between the last adjusting ring and the manhole frame. Up to 12 inches (300 mm) of adjusting rings may be installed on a given manhole. No more than one 2-inch (50 mm) adjusting ring, and no more than two adjusting rings in total shall be used.
- A continuous layer of non-hardening, preformed bituminous mastic material, Consol 102 B or approved equal shall be applied to each manhole barrel cone and top section to provide a watertight seal.
- All brass components shall be certified to be lead free in compliance with NSF 61 and NSF 372 and identified with applicable markings.
- The sanitary forcemain shall be tested a minimum of one (1) hour at 1.5 times the shut off head of the pump, 2.5 times the operating pressure, or 20 psi, whichever is greatest. Allowable leakage shall be in accordance with section 41-2.14C of the Standard Specifications for Water and Sewer Construction.

REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	NO REVISION THIS SHEET			

THE SHOPPES ON WASHINGTON					
SPECIFICATIONS, SPECIAL PROVISIONS, & GENERAL NOTES					
DRN./CKD. BY: SRH/JGC		FILE: 8534SPC	F.LD. BK./PG.: 273/38-39		SHEET NO.
SCALE: NONE	DATE: 04/22/19	JOB NO.: 190-206		2	OF 18

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REVISIONS			REVISIONS		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

THE SHOPPES ON WASHINGTON

TOPOGRAPHIC EXHIBIT AND TED PLAN NOTES

DRN./CKD. BY: SRH/JGC

FILE: 8534E

F.LD. BK./PG.: 273/38-39

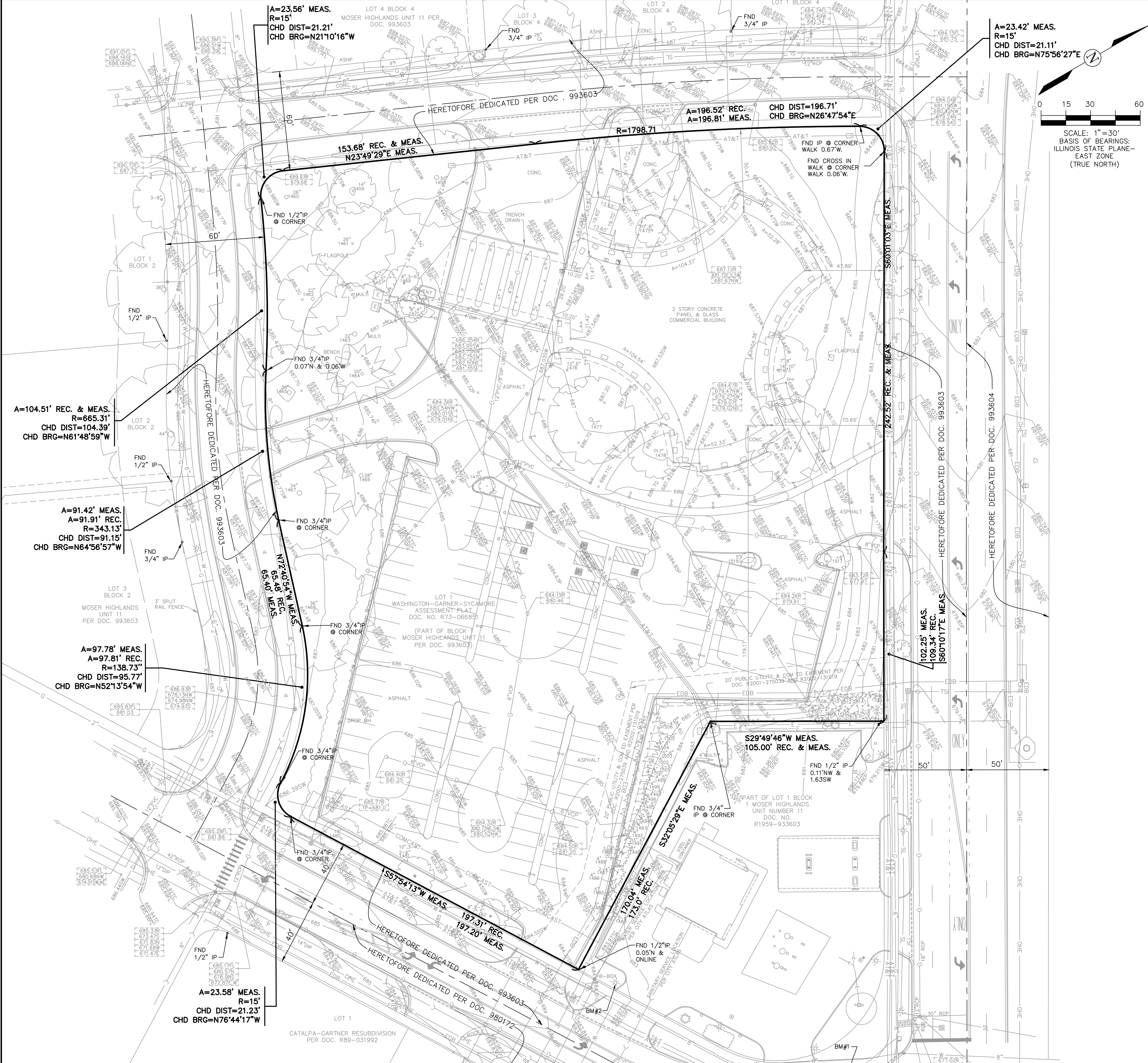
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DATE: 04/22/19

JOB NO.: 190-206

3 OF 18



- TRANSPORTATION, ENGINEERING AND DEVELOPMENT BUSINESS GROUP
STANDARD CONSTRUCTION PLAN NOTES FOR DEVELOPMENT PROJECTS
- GENERAL NOTES
1. THE OWNER OR HIS/HER/ THEIR REPRESENTATIVE IS RESPONSIBLE TO OBTAIN ANY AND ALL PERMITS REQUIRED BY APPLICABLE GOVERNMENT AGENCIES.

2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF NAPERVILLE DESIGN MANUAL AND STANDARD SPECIFICATIONS (CURRENT EDITION) AND WITH THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (CURRENT EDITION).

3. ALL CONTRACTORS DOING WORK IN THE PUBLIC RIGHT-OF-WAY MUST BE LICENSED (WHEN APPLICABLE) TO MAKE PUBLIC IMPROVEMENTS WITHIN THE NAPERVILLE CORPORATE LIMITS.

4. THE CONTRACTOR/DEVELOPER ASSUMES ALL RESPONSIBILITY AND LIABILITY FOR ANY ACTION RESULTING FROM THEIR WORK WITHIN THE PUBLIC RIGHT-OF-WAY.

5. THE CONTRACTOR/DEVELOPER SHALL INDEMNIFY AND HOLD HARMLESS THE CITY OF NAPERVILLE.

6. PRIOR TO COMMENCEMENT OF ANY OFF-SITE CONSTRUCTION, THE CONTRACTOR SHALL SECURE WRITTEN AUTHORIZATION THAT ALL OFF-SITE EASEMENTS HAVE BEEN SECURED AND THAT PERMISSION HAS BEEN GRANTED TO ENTER ONTO PRIVATE PROPERTY.

7. THE CONTRACTOR AND THEIR ON-SITE REPRESENTATIVES WILL BE REQUIRED TO ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY OF NAPERVILLE PRIOR TO ANY WORK BEING STARTED. A PRE-CONSTRUCTION MEETING WILL NOT BE SCHEDULED UNTIL THE PROJECT HAS BEEN APPROVED BY THE CITY OF NAPERVILLE DEVELOPMENT REVIEW TEAM AND THE REQUIRED SURVEY HAS BEEN POSTED.

8. A MINIMUM OF 48 HOURS NOTICE SHALL BE GIVEN TO THE CITY OF NAPERVILLE TED BUSINESS GROUP (630-420-6882) PRIOR TO STARTING WORK OR RESTARTING WORK AFTER SOME ABSENCE OF WORK FOR ANY REASON.

9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ADEQUATELY IDENTIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION. BEFORE STARTING CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN THE LOCATION OF ANY AND ALL UTILITIES. THE TOLL-FREE NUMBER IS 800-892-0123. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ANY PRIVATE FACILITIES OR NON-JULIE MEMBER FACILITIES.

10. THE CONTRACTOR CAN SCHEDULE ALL NECESSARY SITE INSPECTIONS WITH THE CITY OF NAPERVILLE BY CALLING (630) 420-6882 BETWEEN THE HOURS OF 8:00AM AND 4:00PM (CLOSED 1:00PM TO 2:00PM DAILY) ON WEEKDAYS WHEN THE CITY IS OPEN FOR BUSINESS. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THE SITE PERMIT NUMBER FOR THE PROJECT IN ORDER TO SCHEDULE THE INSPECTION(S).

11. RECORD DRAWINGS ARE REQUIRED TO BE SUBMITTED AND APPROVED BY THE CITY OF NAPERVILLE PRIOR TO FINAL OCCUPANCY BEING GRANTED.

12. FINAL ACCEPTANCE OF PUBLIC IMPROVEMENTS SHALL BE GRANTED ONLY AFTER A FINAL INSPECTION HAS BEEN COMPLETED AND HAS REVEALED THAT ALL IMPROVEMENTS HAVE BEEN SATISFACTORILY COMPLETED IN ACCORDANCE WITH THE NAPERVILLE STANDARD SPECIFICATIONS. UTILITIES ARE NOT CONSIDERED ACCEPTED UNTIL THEY ARE FORMALLY ACCEPTED BY THE CITY COUNCIL AS REQUIRED IN ACCORDANCE WITH THE NAPERVILLE MUNICIPAL CODE.

13. NON-PAVED AREAS: EAST JORDAN IRON WORKS 6527 BEEHIVE GRATE, OR APPROVED EQUAL. ALTERNATELY, IN AREAS WHERE THERE IS THE LIKELIHOOD OF PEDESTRIAN TRAFFIC, EAST JORDAN IRON WORKS 1022 FRAME WITH TYPE M1 RADIAL FLAT GRATE, OR APPROVED EQUAL, MAY BE USED.

14. ALL PIPE SHALL BE LAID TRUE TO LINE AND GRADE, DIRT AND OTHER FOREIGN MATERIAL SHALL BE PREVENTED FROM ENTERING THE PIPE OR PIPE JOINT DURING HANDLING OR LAYING OPERATIONS. ALL STORM SEWER PIPE TO PIPE CONNECTIONS SHALL BE SEALED WITH BUTYL MASTIC TO ENSURE WATER TIGHTNESS. LIFT HOLES TO BE SEALED USING BUTYL MASTIC AND CONCRETE PLUGS. AT NO TIME SHALL CONNECTIONS BETWEEN THE STORM SEWER AND SANITARY SEWER BE ALLOWED.

15. FOR STRUCTURES LOCATED IN PAVED AREAS, A MINIMUM OF FOUR, 2-INCH DIAMETER DRILLED OR PRECAST INLET IN THE STRUCTURE WITHIN 1 FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE STRUCTURE. A 1-FOOT BY 1-FOOT SECTION OF UNDERDRAN WITH A 1/2-INCH FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIAL TO PREVENT SIPPAGE DURING BACKFILLING.

16. ADJUSTMENTS MAY BE NECESSARY TO ENSURE THAT FRAMES AND GRATES MATCH THE ELEVATION OF THE SURROUNDING PAVEMENT OR GROUND SURFACE. PREFORMED ADJUSTING RINGS OF THE PROPER DIMENSIONS NEEDED TO MATE THE FRAME TO THE PRECAST STRUCTURE SHALL BE USED. NO MORE THAN 12 INCHES OF VERTICAL ADJUSTMENT MAY BE MADE USING THE MINIMUM PRACTICAL NUMBER OF INDIVIDUAL RINGS.

17. ALL RINGS SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), RECYCLED RUBBER, HIGH DENSITY EXPANDING POLYSTYRENE, EXPANDED POLYPROPYLENE (EPP), OR OTHER MATERIAL AS APPROVED BY THE CITY ENGINEER. PRECAST CONCRETE RINGS, BRICKS, ROCKS, SHIMS, OR CONCRETE BLOCKS WILL NOT BE ALLOWED. TAPERED ADJUSTING RINGS SHALL BE REQUIRED WHEN THE FRAME WILL NOT MATCH THE SLOPE OF THE ROADWAY.

18. A RESILIENT, FLEXIBLE, NON-HARDENING, PREFORMED BITUMINOUS MASTIC MATERIAL, CONSIDERED 1022 OR APPROVED EQUAL, SHALL BE USED BETWEEN THE CONE OR TOP BARREL SECTION OF THE STRUCTURE AND THE ADJUSTING RINGS. A THICK DEED OF NON-HARDENING ELASTOMERIC JOINT SEALANT CONFORMING TO ASTM C-920, TYPE S, GRADE NS, SHALL BE APPLIED BETWEEN ALL INDIVIDUAL RINGS AND BETWEEN THE ADJUSTING RINGS AND THE FRAME. THE SEALANT OR MASTIC MATERIAL SHALL BE APPLIED IN SUCH A MANNER THAT NO SURFACE WATER OR GROUND WATER INFLOW CAN ENTER THE STRUCTURE.

19. ALL STORM SEWER STRUCTURE FRAMES WITHOUT INSIDE FRAMES SHALL BE SHAPED WITH HYDRAULIC CEMENT OR ELASTOMERIC JOINT SEALANT TO FORM A FILLET TO THE STRUCTURE OR ADJUSTING RINGS AND TO MAINTAIN WATER-TIGHTNESS.

20. FRAME ADJUSTMENTS SHALL BE COMPLETED IN ACCORDANCE WITH SECTIONS 602 AND 603 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION PREPARED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION, LATEST EDITION, EXCEPT AS NOTED HEREIN.
- EROSION CONTROL AND DRAINAGE NOTES (GENERAL)
1. THE CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE AT ALL TIMES DURING THE COURSE OF CONSTRUCTION AND PREVENT STORM WATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS.

2. DURING EXTENDED DRY PERIODS, THE CONSTRUCTION AREA(S) MAY NEED TO BE WATERED DOWN TO PREVENT THE BLOWING OF SOIL FROM THE SITE.

3. DURING CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE UTILIZED TO MINIMIZE THE TRACKING OF DIRT ONTO THE PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP PUBLIC STREET PAVEMENT CLEAN OF DIRT AND DEBRIS. ANY DIRT THAT IS TRACKED ONTO THE PUBLIC STREETS SHALL BE REMOVED THE SAME DAY. IF THE AMOUNT TRACKED ON THE PUBLIC STREET IS EXCESSIVE, CLEANING MAY BE REQUIRED MORE FREQUENTLY.
- EROSION CONTROL AND DRAINAGE NOTES (PROJECT SPECIFIC)
1. ALL EROSION CONTROL MEASURES SHALL BE PROPERLY INSTALLED, AS PERMITTED, PRIOR TO ANY LAND DISTURBANCE ACTIVITIES. ALL EROSION CONTROL SHALL BE MAINTAINED UNTIL THE TURF IS ESTABLISHED.

2. ACCEPTABLE PERIMETER EROSION CONTROL INCLUDES SILT FENCE, SILT WORM AND ANY OTHER APPLICATION APPROVED BY THE CITY ENGINEER.

3. ALL OPEN GRATE STRUCTURES SHALL HAVE EROSION CONTROL PROTECTION IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLANS. INLET JACKBOARDS ARE THE PREFERRED METHOD; STRAW BALES SHALL NOT BE USED.

4. STOCKPILES NOT BEING DISTURBED FOR MORE THAN 14 DAYS SHALL BE SEEDDED.

5. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY, AFTER 0.5 INCH RAINFALL, OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN THEIR FUNCTION.

6. IT IS THE RESPONSIBILITY OF THE OWNER OR HIS DESIGNEE TO INSPECT ALL TEMPORARY EROSION CONTROL MEASURES PER THE REQUIREMENTS OF THE NPDES PERMIT AND CORRECT ANY DEFICIENCIES AS NEEDED.
- GEOMETRIC AND PAVING NOTES (GENERAL)
1. THE DEVELOPER AND CONTRACTOR SHALL HAVE THE RESPONSIBILITY TO ADEQUATELY PROTECT THE PAVEMENT AND PROPERTY, CURB AND GUTTER AND OTHER RIGHT-OF-WAY IMPROVEMENTS, WHETHER NEWLY CONSTRUCTED OR EXISTING, FROM ANY DAMAGE. SUFFICIENT MEANS SHALL BE EMPLOYED BY THE CONTRACTOR TO PROTECT AGAINST SUCH DAMAGE TO THE SATISFACTION OF THE CITY ENGINEER.

2. ANY NEW OR EXISTING IMPROVEMENTS THAT ARE DAMAGED SHALL BE REPAIRED OR REPLACED IN A MANNER THAT IS SATISFACTORY TO THE CITY ENGINEER.

3. THE CONTRACTOR AND/OR DEVELOPER SHALL SECURE ALL NECESSARY RIGHTS AND PERMISSIONS TO PERFORM ANY WORK ON PRIVATE PROPERTY NOT WITHIN THE OWNERSHIP RIGHTS OF THE DEVELOPER. THE DEVELOPER SHALL BEAR THE SOLE RESPONSIBILITY FOR DAMAGES THAT MAY OCCUR AS A RESULT OF WORK PERFORMED UNDER CONTRACTS THEY INITIATE.

4. THE CONTRACTOR/DEVELOPER WILL BE RESPONSIBLE FOR BRINGING PAVEMENTS (STREET, CURB AND GUTTER, SIDEWALK, DRIVEWAY) ON THE PROPERTY UP TO CITY STANDARDS INCLUDING ANY REPAIRS TO SUBSTANDARD PAVEMENTS THAT EXISTED PRIOR TO OR OCCURRED DURING CONSTRUCTION.

5. WHEREVER NEW WORK WILL MEET EXISTING CONDITIONS OTHER THAN LAWN AREAS, REGARDLESS OF WHETHER THE NEW OR EXISTING WORK IS ASPHALT OR CONCRETE, THE EXISTING ADJACENT SIDEWALK, DRIVEWAYS, PAVEMENT OR CURB SHALL BE NEATLY SAW CUT. THE SAW CUT SHALL BE IN A NEAT STRAIGHT LINE SUFFICIENTLY DEEP SO THAT IT RENDERS A SMOOTH VERTICAL FACE TO MATCH TO. IF THE CONTRACTOR IS NOT CAREFUL OR DOES NOT SAW DEEP ENOUGH AND THE CUT LINE BREAKS OUT OR CHIPS TO AN IMPERFECT EDGE, THEN THE EXISTING SIDE MUST BE RE-CUT SQUARE AND DONE OVER UNTIL IT IS CORRECT.
- TRAFFIC CONTROL AND PROTECTION NOTES (GENERAL)
1. ALL DEVELOPERS AND CONTRACTORS SHALL PROVIDE SUITABLE TRAFFIC CONTROL FOR THEIR CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH PART 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. TRAFFIC CONTROL MUST BE PROVIDED FOR ANY ACTIVITY THAT IMPACTS TRAFFIC FLOW. THIS INCLUDES, BUT IS NOT LIMITED TO, ROAD CLOSURES REQUIRING DETOURS, DAILY LANE CLOSURES, LONG TERM LANE CLOSURES, NARROW LANES, AND CONSTRUCTION VEHICLES ENTERING AND EXITING PUBLIC ROADWAYS AND PUBLIC ROADWAYS. TRAFFIC CONTROL SET-UPS MAY BE INSPECTED BY THE CITY OF NAPERVILLE TO ENSURE THAT THEY ARE PROVIDING POSITIVE GUIDANCE TO MOTORISTS AND ARE NOT IN THEMSELVES PRESENTING A HAZARDOUS SITUATION. A REPRESENTATIVE OF THE DEVELOPER OR CONTRACTOR MUST PROVIDE PHONE NUMBERS AT WHICH THEY CAN BE REACHED 24 HOURS A DAY AND ON WEEKENDS SO THAT THEY CAN MAINTAIN TRAFFIC CONTROL DEVICES.

2. PEDESTRIANS MUST BE PROVIDED WITH A SAFE ALTERNATE ROUTE IF PEDESTRIAN FACILITIES ARE TO BE CLOSED AS A RESULT OF CONSTRUCTION ACTIVITIES. GUIDANCE MUST BE PROVIDED TO PEDESTRIANS SO THAT THEY MAY AVOID THE WORK ZONE. SAID PEDESTRIAN DETOUR PLAN (WITH SIGNAGE) IS TO BE REVIEWED AND ACCEPTED BY THE CITY IN WRITING, PRIOR TO THE COMMENCEMENT OF THE WORK.

3. THE CONTRACTOR SHALL EMPLOY THE APPROPRIATE METHODS OF TRAFFIC CONTROL IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SUCH THAT THE SAFETY OF VEHICLES, AND PEDESTRIANS IS PRESERVED AT ALL TIMES. THE CREATION AND MAINTENANCE OF THE TRAFFIC CONTROL DEVICES SHALL BE TO THE SATISFACTION OF THE AGENCY OF JURISDICTION AND THE CITY ENGINEER.

4. ANY TEMPORARY OPEN HOLES SHOULD BE BARRICADED AND PROTECTED IN ACCORDANCE WITH APPLICABLE STANDARDS.

5. A MINIMUM 72 HOUR NOTICE IS REQUIRED FOR TRAFFIC CONTROL THAT REDUCES THE WIDTH OF A TRAVEL LANE LESS THAN 12 FEET OR CLOSURES A LANE. APPROVAL FROM THE CITY ENGINEER WILL BE REQUIRED PRIOR TO THE IMPLEMENTATION OF SUCH TRAFFIC CONTROL LAYOUT.

6. LANE CLOSURES ON ARTERIAL ROADWAYS WITHIN THE CITY OF NAPERVILLE ARE NOT PERMITTED BETWEEN THE HOURS OF 6AM-9AM AND 3PM-7PM MONDAY THROUGH FRIDAY, UNLESS OTHERWISE PERMITTED BY THE CITY ENGINEER. LANE CLOSURES ON ARTERIAL STREETS ARE PERMITTED BETWEEN 7AM AND 7PM ON WEEKENDS, UNLESS OTHERWISE PERMITTED BY THE CITY ENGINEER. ARTERIAL ROADWAYS ARE DEFINED AS BOTH MAJOR AND MINOR ARTERIAL ROADWAYS AS DESIGNATED ON THE CITY'S MASTER THOROUGHFARE PLAN, LATEST EDITION.

7. ANY WORK THAT IMPACTS A TRAFFIC LANE ON AN ARTERIAL ROADWAY REQUIRES AN ARROWBOARD AS PART OF THE TRAFFIC CONTROL.

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NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

LEGEND	
	BITUMINOUS PAVEMENT REMOVAL
	GRAVEL TO BE REMOVED
	BUILDING OR SIDEWALK PREVIOUSLY REMOVED (SEE NOTE 1)
	CONCRETE OR UTILITY SERVICE TO BE REMOVED
	INDICATES NON-CONCRETE ITEM, STRUCTURE, OR TREE TO BE REMOVED
	FILTER BASKET
	TREES TO BE PROTECTED WITH FENCING
	SILT FENCE
	CONSTRUCTION FENCE (CHAIN-LINK)

DEMOLITION NOTES

1. THE EXISTING BUILDING, PORTIONS OF THE SITE PAVEMENT AND SIDEWALK, SEVERAL TREES AND SITE LIGHT STANDARDS (NOT FOUNDATIONS) HAVE BEEN REMOVED AS PART OF PHASE I DEMOLITION. THE CONTRACTOR SHALL VISIT THE SITE TO EVALUATE REMAINING REMOVAL ITEMS PRIOR TO FINALIZING HIS BID.

ALL PAVEMENTS, UTILITIES, TREES, ETC. WITHIN THE SUBJECT PROPERTY SHALL BE COMPLETELY REMOVED. REMOVAL ITEMS SHOWN OUTSIDE OF THE PROPERTY LIMITS ARE APPROXIMATE AND MAY OR MAY NOT CONSTITUTE ALL WORK NECESSARY TO CONSTRUCT THE PROJECT. REMOVAL OF PUBLIC SIDEWALKS, ROADWAYS, DRIVEWAYS, CURB & GUTTER, PUBLIC UTILITIES, ETC., SHALL BE STAGED BY THE CONTRACTOR WITH CONCURRENCE FROM THE OWNER, ENGINEER, AND THE CITY OF NAPERVILLE STAFF.

2. TRENCHES, WITHIN PROPOSED PAVED OR BUILDING PAD AREAS, RESULTING FROM THE REMOVAL OF EXISTING UTILITIES SHALL BE BACKFILLED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF ART. 550.07 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

3. ALL EXISTING PAVEMENT WITHIN THE CONSTRUCTION LIMITS, INCLUDING BITUMINOUS PAVEMENT, DRIVEWAYS, ACCESS ROADS, CONCRETE SLABS, AND SIDEWALKS SHALL BE COMPLETELY REMOVED. AGGREGATE MATERIALS APPROVED AS SUITABLE FILL BY THE SOILS ENGINEER SHALL BE SET ASIDE FOR FUTURE PLACEMENT.

4. ALL TREES AND BRUSH WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED. TREE STUMPS AND/OR ROOT BALLS SHALL BE COMPLETELY REMOVED. TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO FINALIZING HIS BID FOR TREE REMOVAL.

5. THE DURATION OF THE PUBLIC SIDEWALK CLOSURE (IF REQUIRED) SHALL BE KEPT TO A MINIMUM. SIDEWALK CLOSURE SHALL BE IN ACCORDANCE WITH IDOT STANDARD 701801.

6. THE CONTRACTOR SHALL COORDINATE WITH THE VARIOUS UTILITY COMPANIES TO INSURE THAT SERVICE IS PROVIDED TO ADJACENT PROPERTIES DURING CONSTRUCTION. ALL MATERIAL, EXCEPT THAT BELONGING TO A PUBLIC UTILITY COMPANY OR DENOTED FOR SALVAGE, SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE OWNER(S) OF WATER, ELECTRIC, AND GAS METERS WHEN THE METERS ARE READY FOR REMOVAL. (THE WATER METER SHALL BE REMOVED AND RETAINED BY THE CITY.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING ALL UTILITIES IN COMPLIANCE WITH LOCAL REQUIREMENTS.

7. EXISTING UTILITY LOCATIONS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES THAT ARE INTENDED TO CONTINUE TO PROVIDE SERVICE WHETHER THESE UTILITIES ARE SHOWN ON THE PLANS OR NOT.

8. ALL DEBRIS FROM DEMOLITION SHALL BE HAULED OFF SITE AND DISPOSED OF BY LEGAL MEANS.

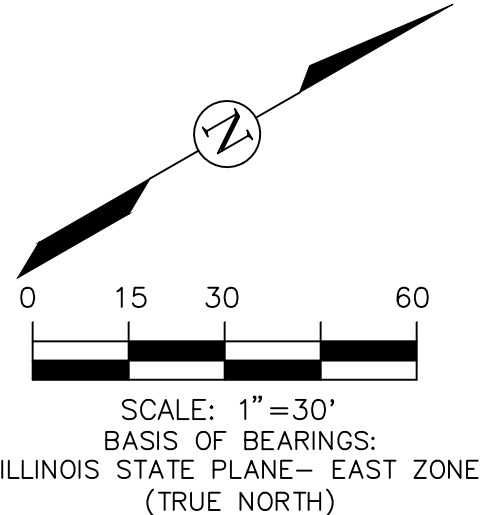
9. ALL WORK SHALL BE DONE IN GENERAL ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS CONTAINED IN THE MUNICIPAL "SOIL EROSION AND SEDIMENTATION CONTROL" ORDINANCE. THE CONTRACTOR SHALL INSTALL THE NECESSARY EROSION AND SEDIMENTATION CONTROL DEVICES THAT WILL PROTECT THE EXISTING STORM SEWERS, PUBLIC ROADWAYS, AND ADJACENT PROPERTIES FROM SEDIMENT THAT MAY ARISE FROM THE PROPOSED DEMOLITION AND/OR CONSTRUCTION. DEVICES SHALL INCLUDE SILT FENCE, FILTER BASKETS INSERTED INTO DRAINAGE STRUCTURES, CONSTRUCTION ENTRANCE, PAVEMENT CLEANING, ETC. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

10. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. CONCRETE TRUCKS SHALL NOT BE PERMITTED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON SITE. SPECIFIC AREAS FOR THIS ACTIVITY SHALL BE DESIGNATED BY THE CONTRACTOR AND PROVIDED WITH ADEQUATE SILTATION BASINS AND OTHER FACILITIES TO ASSURE THAT DISCHARGE IS CONTAINED AND CLEANSED BEFORE ENTERING THE RECEIVING STORM SEWER SYSTEM.

11. ALL ADJACENT STREETS SHOULD BE KEPT CLEAR OF MUD/DEBRIS. THE CONTRACTOR SHALL INSPECT THE STREETS DAILY AND CLEAN THEM AS NECESSARY.

12. A TEMPORARY CHAINLINK CONSTRUCTION FENCE AND GATE ARE SHOWN AT THE PROPOSED CONSTRUCTION ENTRANCE. THE FENCE WILL BE REMOVED AND REPLACED AS REQUIRED TO ALLOW FOR UTILITY INSTALLATIONS, ROADWAY WORK, ETC. DURING WORKING HOURS BUT SHALL BE REINSTALLED AT THE END OF EACH DAY TO PROVIDE A SECURE CONSTRUCTION SITE. PLACEMENT OF THE TEMPORARY CONSTRUCTION FENCE/GATE SHALL NOT IMPEDE INGRESS/EGRESS.

13. THE EXISTING SANITARY SERVICE LATERAL SCHEDULED FOR REMOVAL SHALL BE CAPPED AT THE MAIN USING A STAINLESS STEEL REPAIR CLAMP, MODEL CR1 AS MANUFACTURED BY CASCADE WATERWORKS OR APPROVED EQUAL. THE ABANDONED SANITARY SERVICE SHALL BE COMPLETELY REMOVED.



THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING AROUND THE COMMUNICATION FIBER OPTIC LINE(S). THIS MAY INCLUDE HAND EXCAVATION WHEN INSTALLING PROPOSED STORM SEWER CROSSINGS.

FIGURE 1

STANDARD TEE CONNECTION

EXISTING CLAY ON PVC

1 MIN.

1 MIN.

PVC TEE OR WYE

PVC

STAINLESS STEEL COUPLING

CLAY PIPE

FIGURE 2

STANDARD SADDLE CONNECTION

EXISTING PVC OR LINED PIPE

1 MIN.

1 MIN.

SADDLE (GENCO MODEL DEPICTED)

SLUPLINING

CLAY PIPE

STANDARD TEE CONNECTION-FIGURE 1

1. BYPASS OR RESTRICT FLOW IN PIPE AS REQUIRED.
2. SAW CUT AND REMOVE EXISTING PIPE TO MINIMUM EXTENT SHOWN IN FIGURE 1.
3. INSTALL STANDARD PVC TEE AND PIPE AS SHOWN, PVC SHALL BE SDR26, ASTM 2241.
4. FLEXIBLE COUPLING SHALL BE A NON-SHEARING TYPE TRANSITION COUPLING, FERNCO STRONG BACK RC 1000 SERIES, CASCADE STYLE CSS COUPLING, OR APPROVED EQUAL.

STANDARD SADDLE CONNECTION FIGURE 2

1. FOR LINED PIPE CAREFULLY REMOVE OLD CLAY PIPE TO MINIMUM EXTENT SHOWN WITHOUT DAMAGING LINER PIPE.
2. HOLES FOR SADDLE INLET SHALL BE LAID OUT USING SADDLE AS TEMPLATE AND CUT WITH APPROPRIATE EQUIPMENT NOT DAMAGE THE PIPE TO REMAIN. HOLE TO BE BE BURIED AND BEVELED WHERE REQUIRED TO PROVIDE HOLE SLOPE TO CONFORM TO THE FITTING.
3. SADDLE SHALL BE SEALTITE TEE "U" MODEL 40 BY GENCO, CASCADE STYLE CSWRY OR CSWRT, OR APPROVED EQUAL.



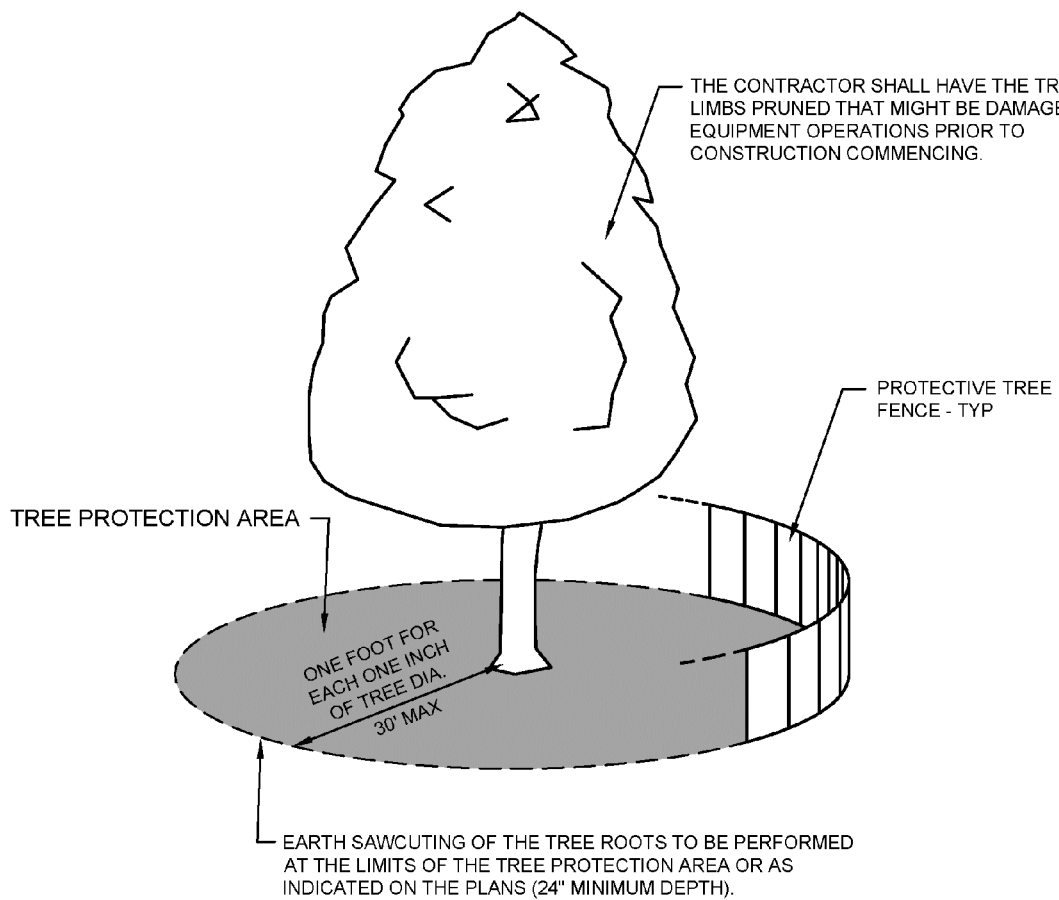
City of Naperville
**STANDARD
DETAIL**

**SANITARY SEWER SERVICE
CONNECTION**

REVISED: 08/01/2018

SHEET 1 OF 1

SANITARY 21
390.21



NOTES:

1. A TREE PROTECTION AREA SHALL BE ESTABLISHED AROUND A TREE A DISTANCE OF ONE FOOT FOR EACH ONE INCH OF TREE DIAMETER, UP TO A MAXIMUM OF 30 FEET.
2. PROTECTIVE TREE FENCE SHALL BE INSTALLED AT THE LIMITS OF THE TREE PROTECTION AREA. THE FENCE SHALL BE HIGH ENOUGH SO AS TO BE VISIBLE TO ALL CONSTRUCTION PERSONNEL.
3. GRADE CHANGES, UTILITY TRENCHES, STORAGE OF CONSTRUCTION MATERIAL, DUMPING OF WASTE, OR OPERATION OR STORAGE OF ANY EQUIPMENT SHALL NOT BE ALLOWED WITHIN THE TREE PROTECTION AREA.
4. AUGURING IS REQUIRED IF A UTILITY MUST BE INSTALLED WITHIN THE TREE PROTECTION AREA. AUGURED UTILITIES MUST BE A MINIMUM OF 24 INCHES BELOW GRADE.
5. ALL TREES TO BE SAVED WHICH HAVE BEEN SUBJECTED TO CONSTRUCTION ACTIVITY WITHIN THE TREE PROTECTION AREA SHOULD BE SELECTIVELY THINNED 10% BY AN ARBORIST SKILLED AT THE SELECTIVE THINNING PROCEDURE. NONE OF THE TREES SHALL BE TOPPED, HEADED BACK, SKINNED (REMOVAL OF THE INTERIOR BRANCHES), OR CLIMBED WITH SPIKES. ALL DEAD WOOD SHOULD BE REMOVED TO AVOID HAZARD.
6. IT IS RECOMMENDED THAT FOLLOWING CONSTRUCTION, TREES BE MAINTAINED IN THEIR NATIVE CONDITION. NO LAWN SHOULD BE PLACED AROUND THE TREES. IT IS RECOMMENDED THAT THE AREA BE MULCHED WITH 2 INCHES OF DECOMPOSED LEAVES AND 2 INCHES OF WOOD CHIPS OR BARK.



City of Naperville
**STANDARD
DETAIL**

TREE PROTECTION

REVISED: 08/01/2018

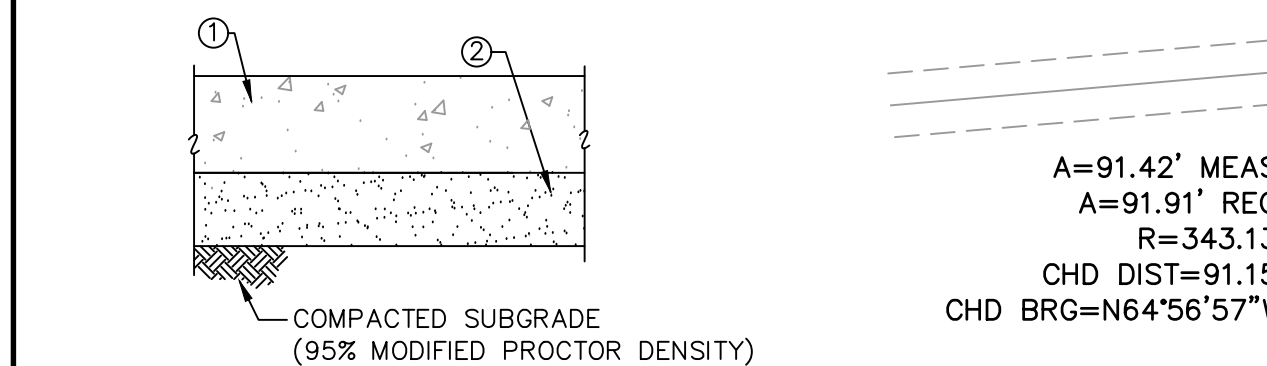
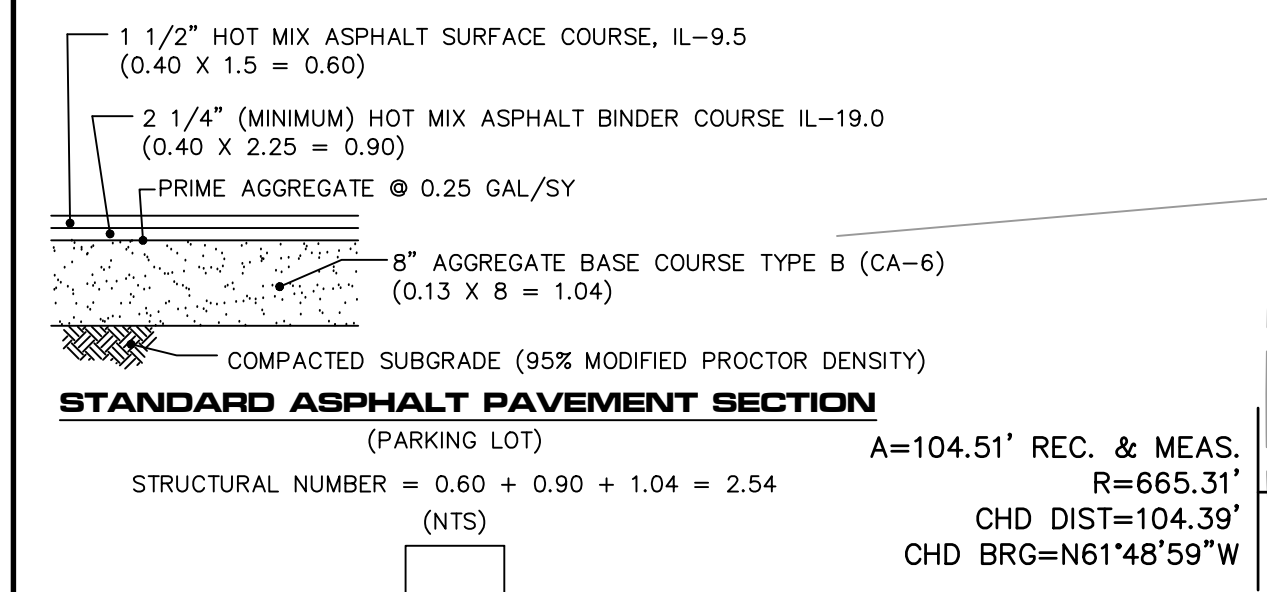
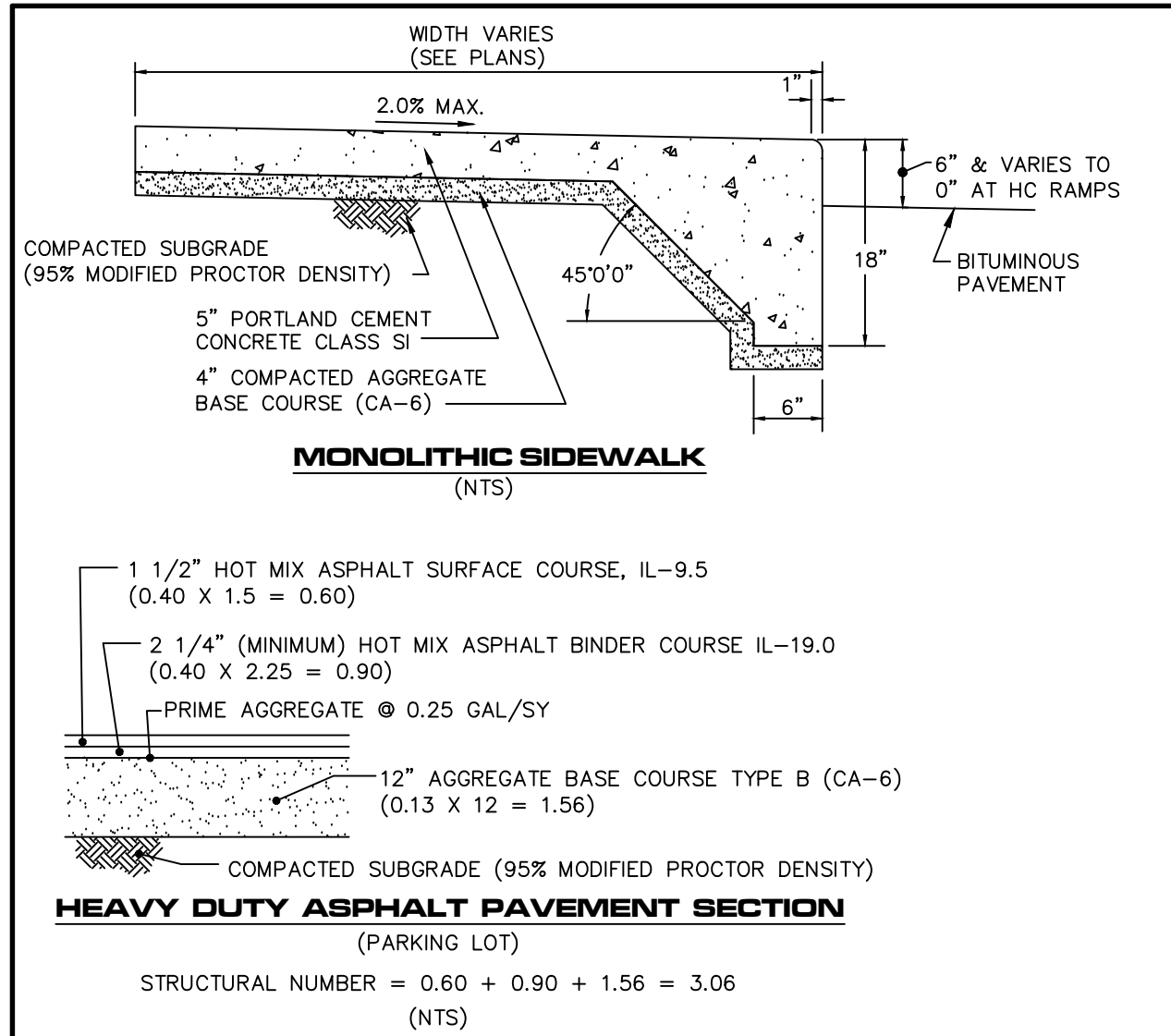
SHEET 1 OF 1

LANDSCAPE 10
790.10

THE SHOPPES ON WASHINGTON

DEMOLITION PLAN

DRN./CKD. BY: SRH/JGC	FILE: 8534E	FLD. BK./PG.: 273/38-39	SHEET NO. 4 OF 18
SCALE: 1"=30'	DATE: 04/22/19	JOB NO.: 190-206	



DRIVE-THRU LANE, TRASH ENCLOSURE PAD AND APRONS.
DRIVEWAY APRONS AND CONCRETE MEDIAN

8" PORTLAND CEMENT CONCRETE, CLASS PV
4" COMPACTED CA-6 AGGREGATE BASE COURSE

SIDEWALK

4" PORTLAND CEMENT CONCRETE, CLASS SI (PUBLIC)
5" PORTLAND CEMENT CONCRETE, CLASS SI (PRIVATE)
2" COMPACTED CA-6 AGGREGATE BASE COURSE (PUBLIC)
4" COMPACTED CA-6 AGGREGATE BASE COURSE (PRIVATE)

CONCRETE PAVEMENT
(NTS)

SITE DATA

GROSS BOUNDARY AREA	152,404 S.F. OR (3.499 AC.)
NET BOUNDARY AREA	152,404 S.F. OR (3.499 AC.)
ROW DEDICATED	N/A

AREA

BUILDING "A" AREA	2,400 S.F. (1.57%)
BUILDING "B" AREA	5,100 S.F. (3.35%)
BUILDING "C" AREA	
GROUND FLOOR	10,500 S.F. (6.89%)
SECOND FLOOR	10,500 S.F.
<u>TOTAL AREA</u>	<u>21,000 S.F.</u>

PERVIOUS AREA	49,330 S.F. (32.37%)
IMPERVIOUS AREA	103,074 S.F. (67.63%)

PARKING REQUIRED		
BUILDING "A"	2,400 S.F. x (4.5 SPACES/1,000 S.F.)	11 SPACES
BUILDING "B"	5,100 S.F. x (10 SPACES/1,000 S.F.)	51 SPACES
BUILDING "C"		
C1	4,570 S.F. x (10 SPACES/1,000 S.F.)	46 SPACES
C2	13,500 S.F. x (3.3 SPACES/1,000 S.F.)	45 SPACES
C3	2,720 S.F. x (4.5 SPACES/1,000 S.F.)	12 SPACES
TOTAL REQUIRED		165 SPACES

PARKING PROVIDED	
REGULAR SPACES	159 SPACES
<u>HANDICAP SPACES</u>	6 SPACES
TOTAL	<u>165 SPACES</u>

ZONING

EXISTING	OCI (OFFICE/COMMERICAL/INSTITUTIONAL)
PROPOSED	B-1 (NEIGHBORHOOD CONVENIENCE SHOPPING CENTER)



PREPARED FOR:
TARTAN REALTY GROUP, INC.
 350 WEST HUBBARD STREET, #640
 CHICAGO, ILLINOIS 60654
 TEL. (312) 377-8375
 FAX. (312) 377-8351

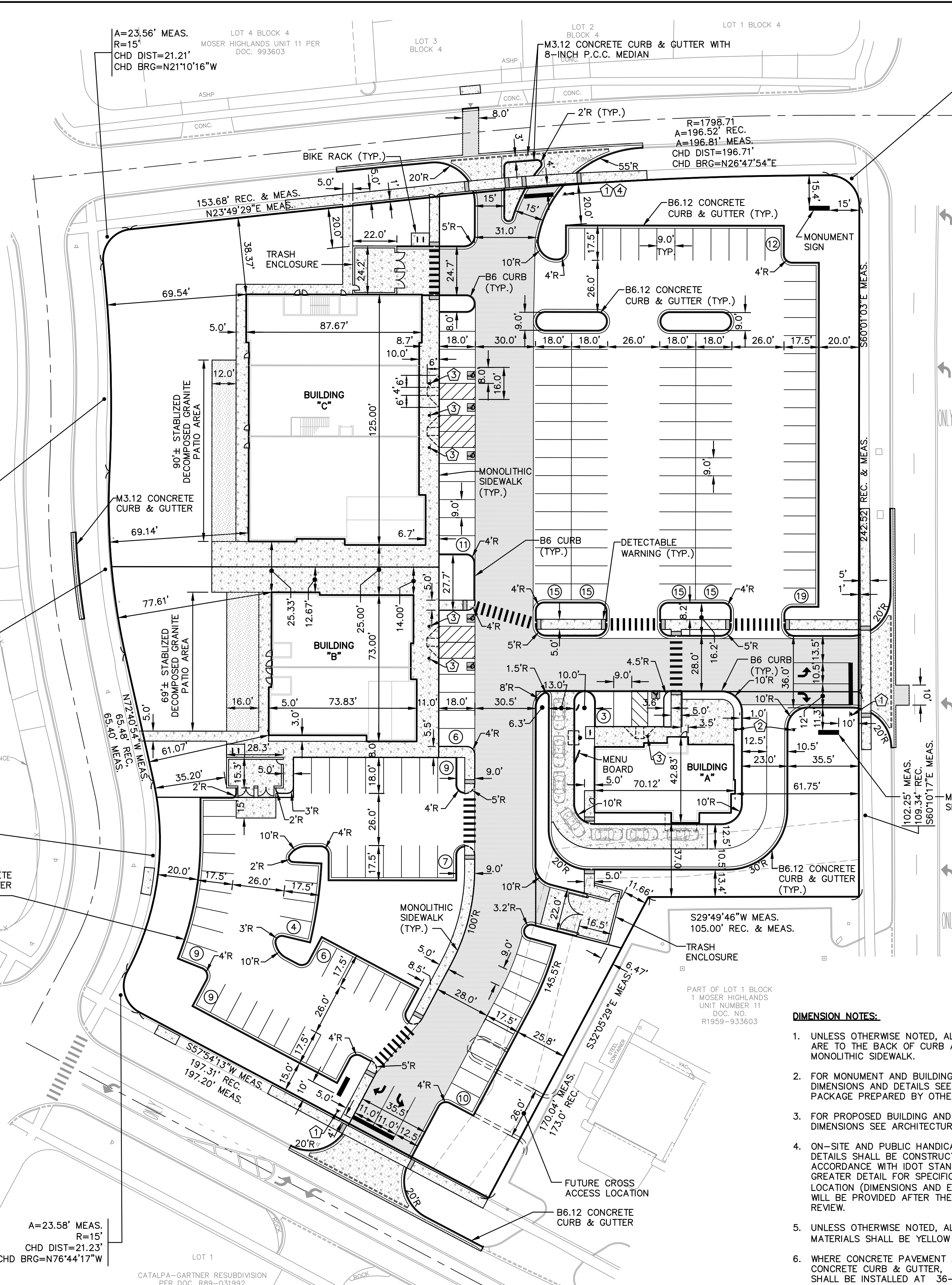
REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

THE SHOPPES ON WASHINGTON

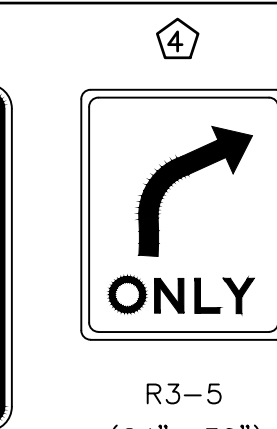
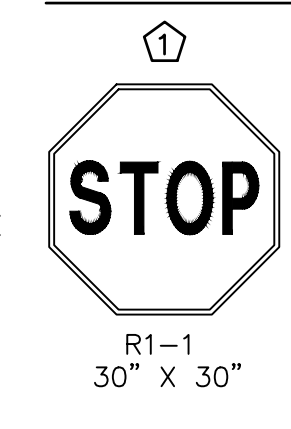
DIMENSION PLAN

DRN./CKD. BY: SRH/JGC	FILE: 8534E	FLD. BK./PG.: 273/38-39
SCALE: 1"=30'	DATE: 04/22/19	JOB NO.: 190-206

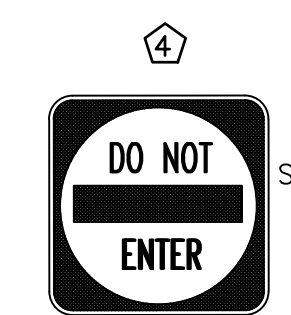
SHEET NO.
5 OF 18



SIGN LEGEND



A=23.42' MEAS.
R=15'
CHD DIST=21.11'
CHD BRG=N75°56'27"E

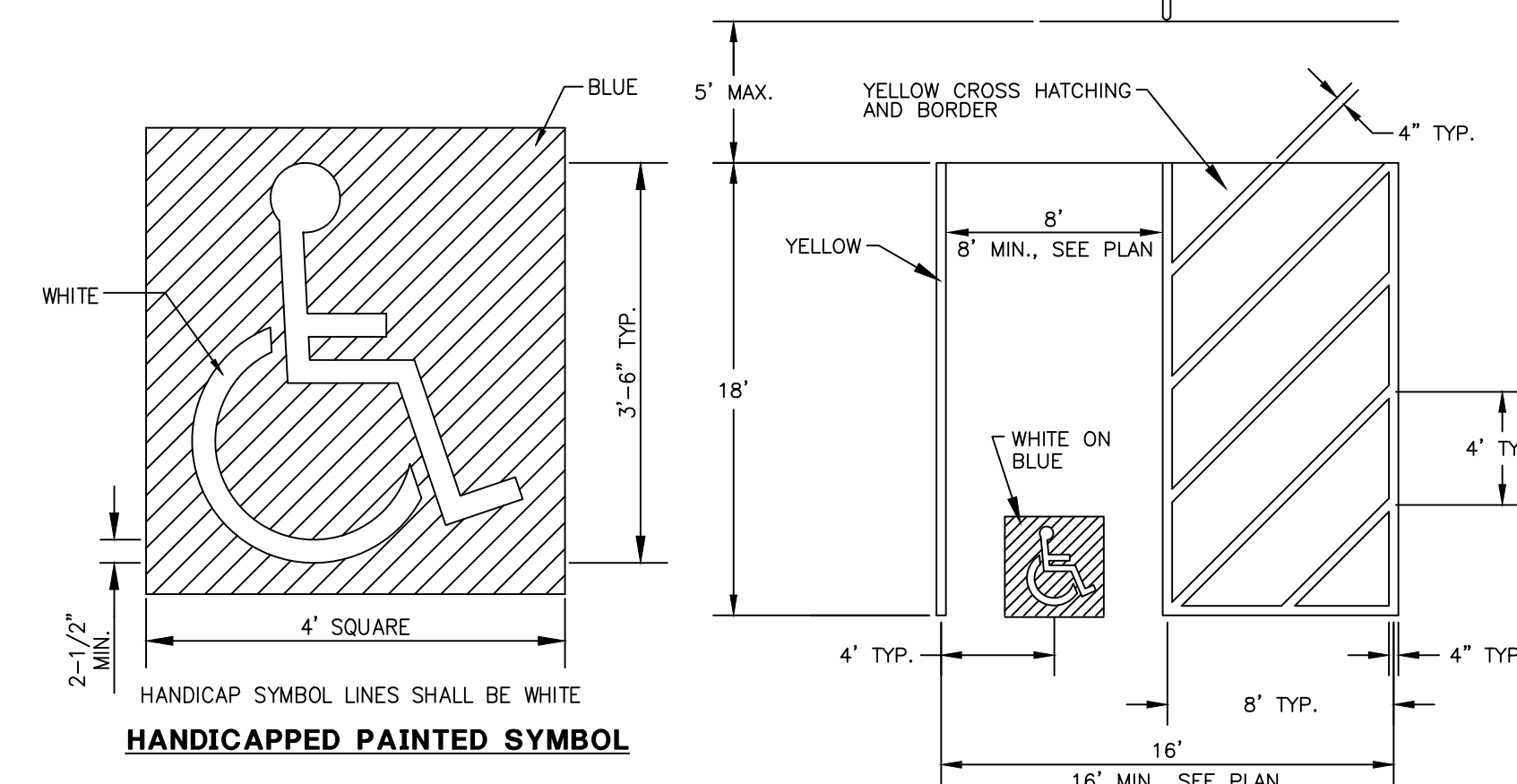
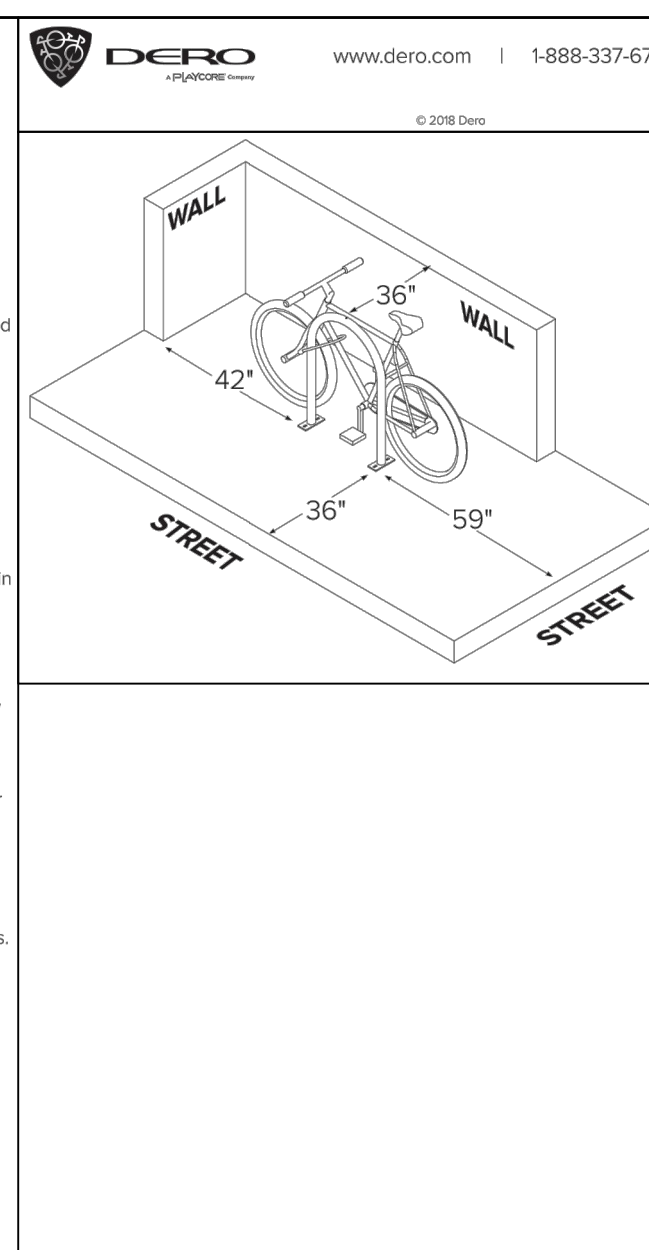
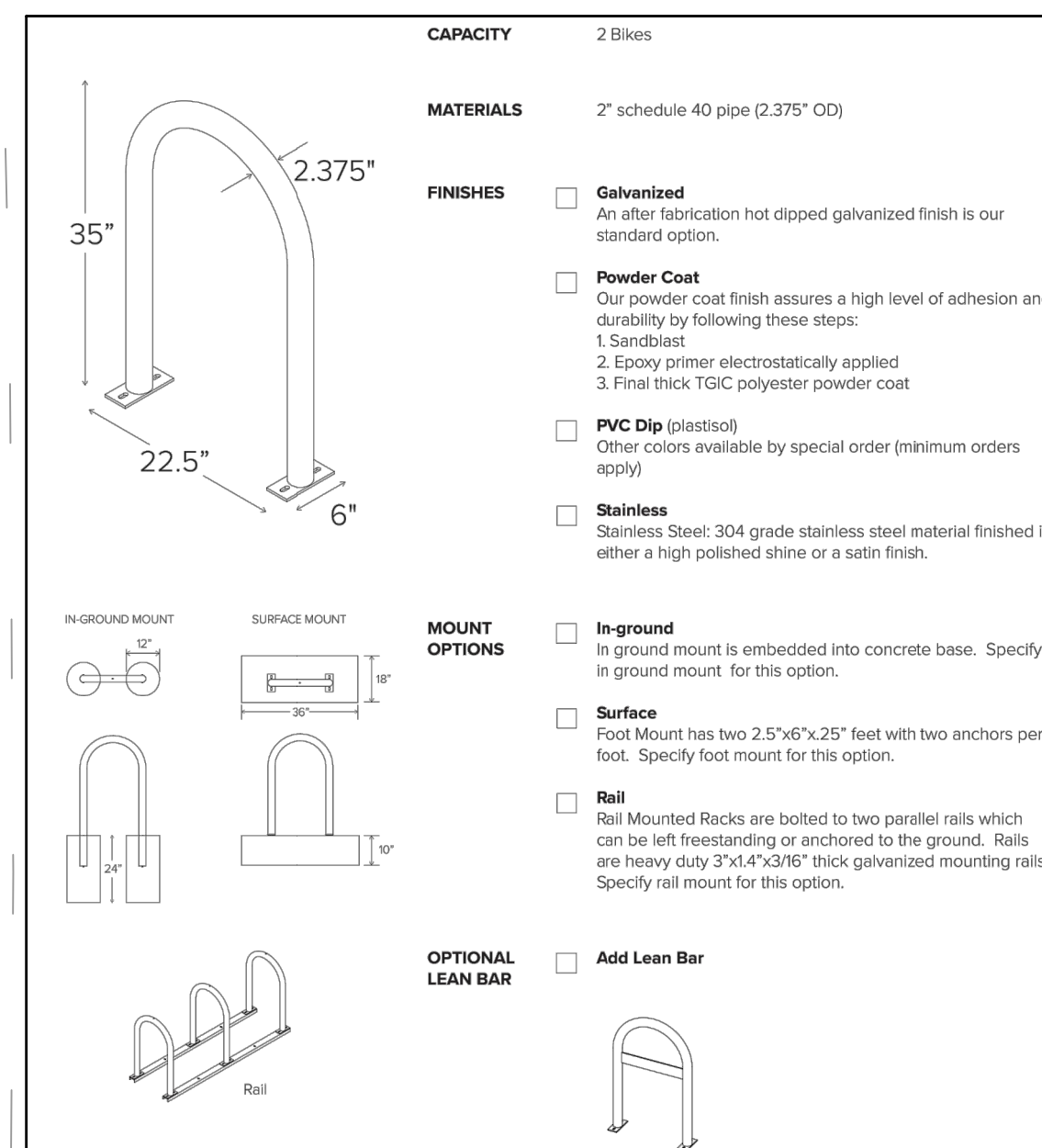


SIGN REQUIRING "\$250 FINE"
ILLINOIS STANDARD
R7-1101



VAN
ACCESSIBLE

VAN ACCESSIBLE SIGN
18" X 9"
2" SERIES D LETTERS



ACCESSIBLE PARKING SPACE MARKINGS

N.T.S

NOTES FOR HANDICAP PARKING STALLS:

1. EACH PARKING SPACE SHALL BE AT LEAST EIGHT FEET WIDE, WITH AN EIGHT FOOT WIDE ACCESS AISLE, FOR A TOTAL OF SIXTEEN FEET.
2. ADJACENT HANDICAPPED PARKING SHALL NOT SHARE A COMMON ACCESS AISLE.
3. SIGNS SHALL BE VERTICALLY MOUNTED ON A POST OR A WALL AT THE FRONT CORNER OF THE PARKING SPACE TO MORE THAN FIVE (5) FEET HORIZONTALLY FROM THE FRONT OF A PARKING SPACE AND SET A MINIMUM OF FOUR (4) FEET FROM THE FINISHED GRADE TO THE BOTTOM OF THE SIGN.
4. HANDICAPPED PARKING SIGNS SHALL ALSO EXHIBIT THE WORDS "\$250.00 FINE".
5. PARKING SPACES DESIGNED FOR PERSONS WITH DISABILITIES AND ACCESSIBLE PASSENGER LOADING ZONES THAT SERVE A PARTICULAR BUILDING, SHALL BE LOCATED ON THE SHORTEST POSSIBLE ACCESSIBLE ENTRANCE OF THE BUILDING.
6. IN SEPARATE PARKING STRUCTURES OR LOTS THAT DO NOT SERVE A PARTICULAR BUILDING, PARKING SPACES FOR PERSONS WITH DISABILITIES SHALL BE LOCATED ON THE SHORTEST POSSIBLE ACCESSIBLE ROUTE TO AN ACCESSIBLE PEDESTRIAN ENTRANCE OF THE PARKING FACILITY.

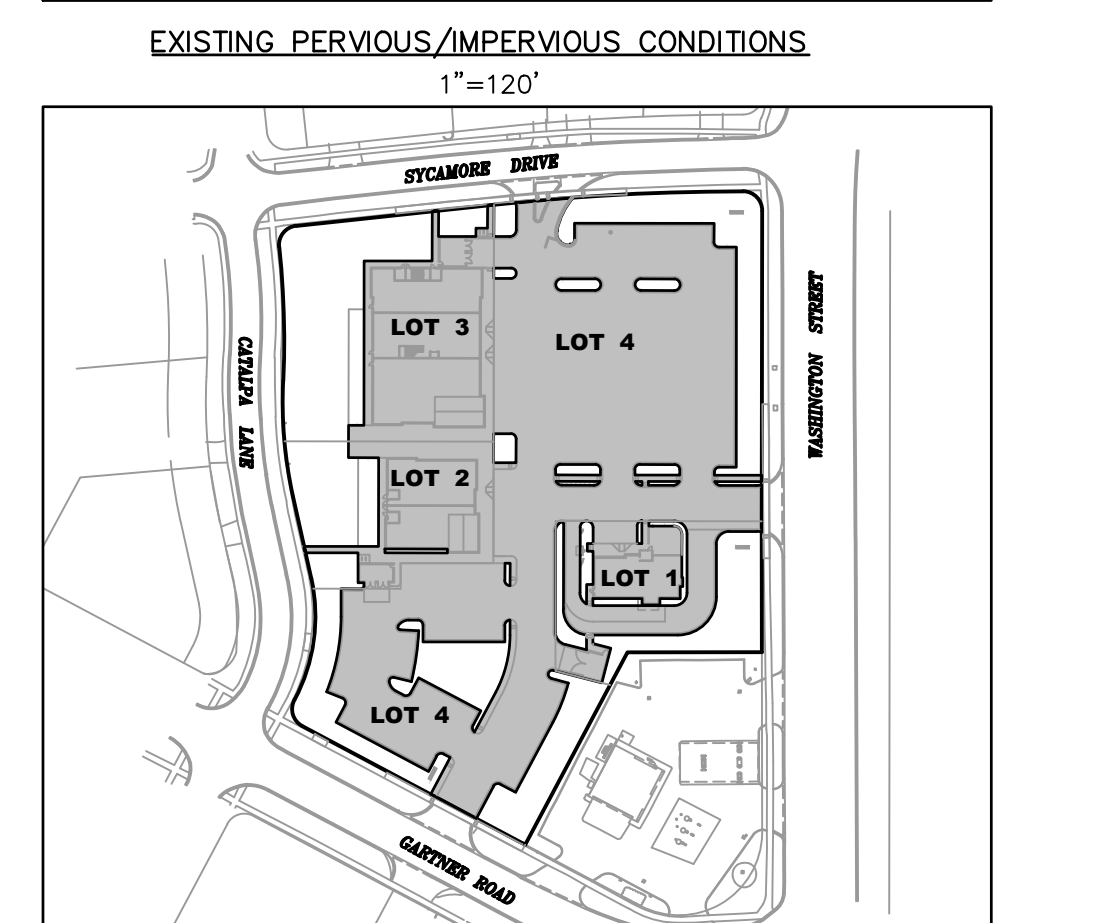
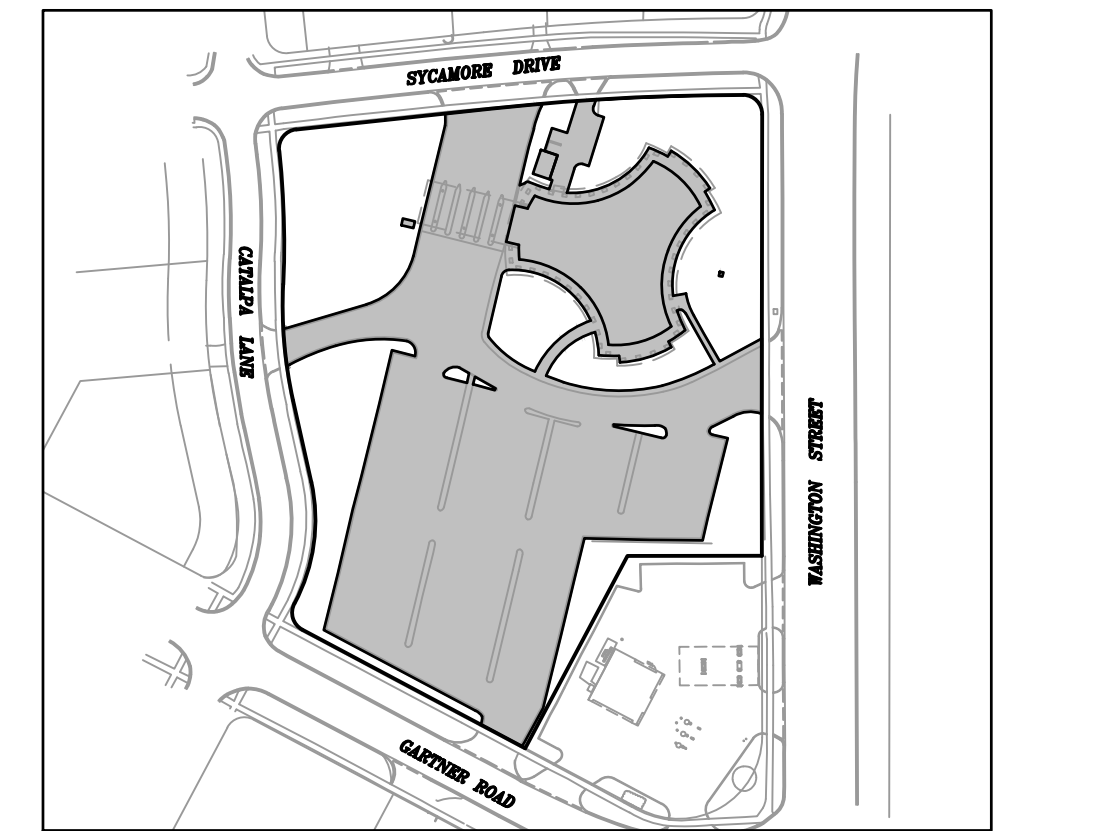
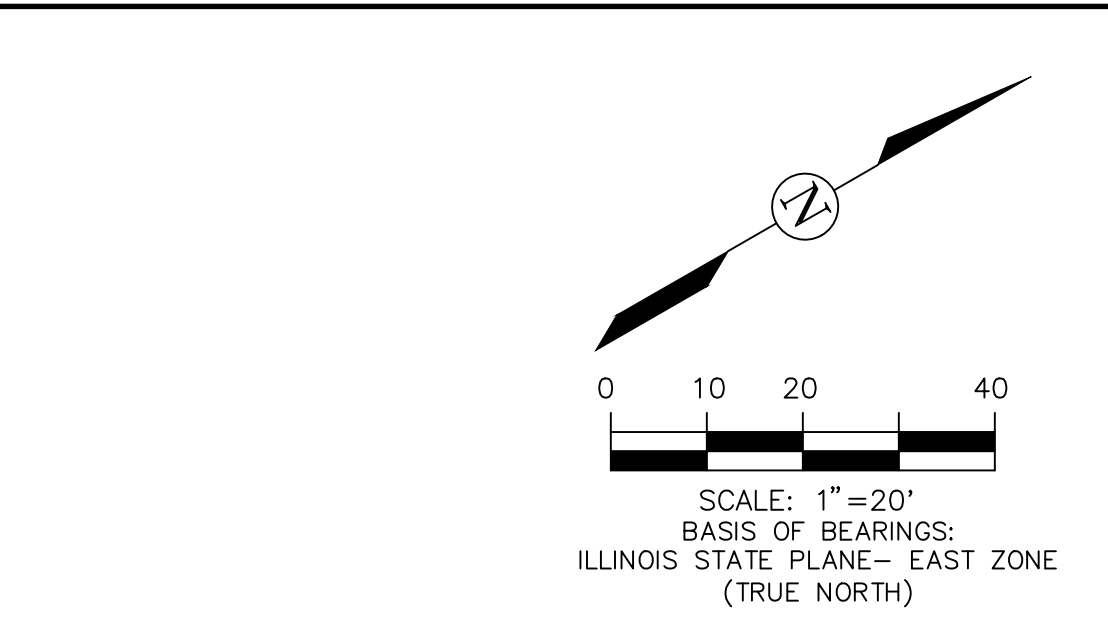
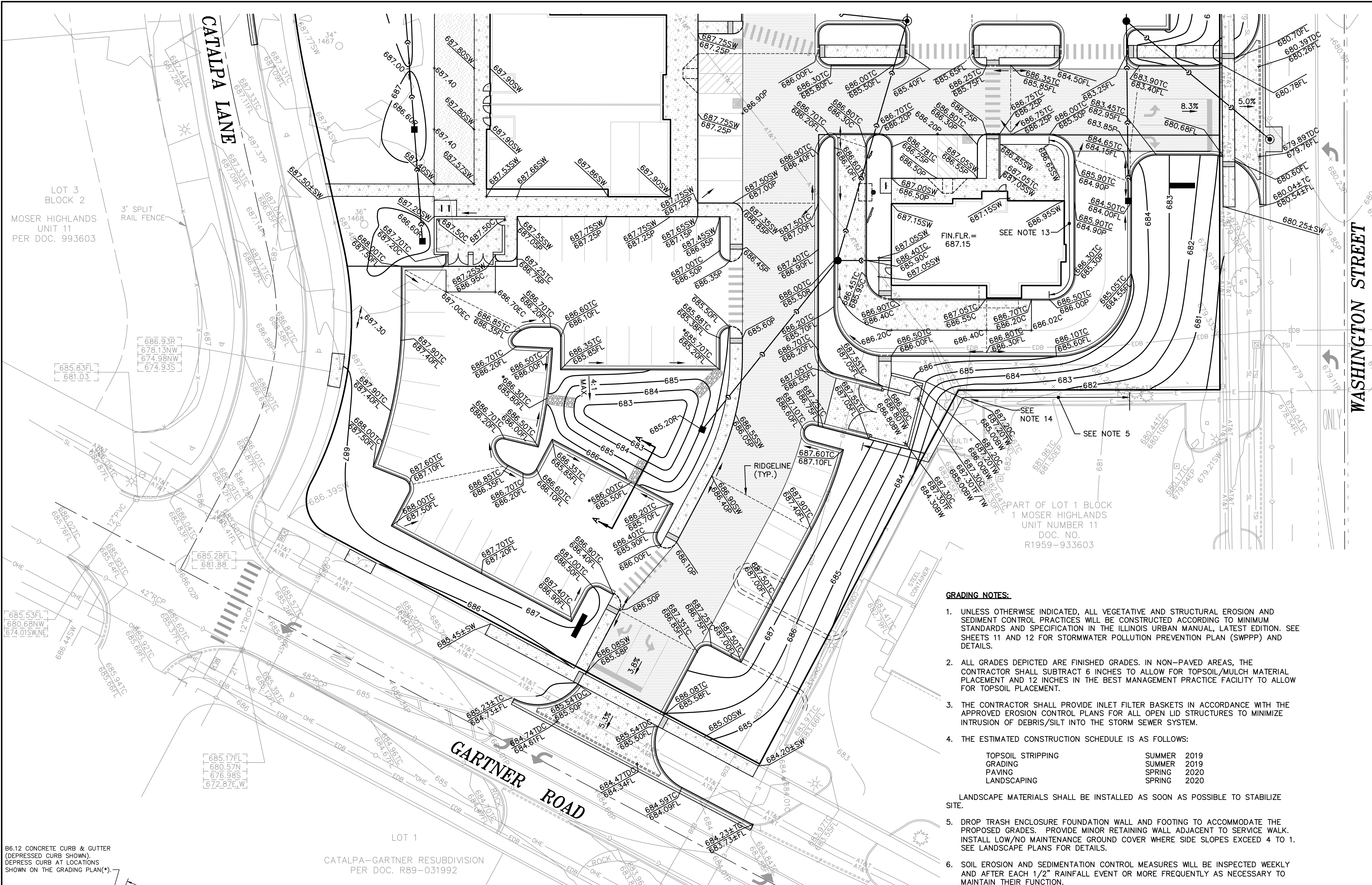
# OF HANDICAP SPACES REQUIRED PER # OF OFF STREET PARKING	
TOT. OFF STREET PKRG SPACES REQUIRED	ACCESSIBLE PKRG SPACES REQRD MIN. # OF
1 TO 20	1
21 TO 50	2
51 TO 75	3
76 TO 100	4
101 TO 150	5
151 TO 200	6
201 TO 300	7
301 TO 400	8
401 TO 500	9
501 TO 1000	2% OF TOTAL NUMBER
OVER 1000	20 PLUS 1 FOR EACH 100 OVER 1000

DIMENSION NOTES:

1. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO THE BACK OF CURB AND FACE OF MONOLITHIC SIDEWALK.
2. FOR MONUMENT AND BUILDING SIGN DIMENSIONS AND DETAILS SEE SIGNAGE PACKAGE PREPARED BY OTHERS.
3. FOR PROPOSED BUILDING AND PATIO DIMENSIONS SEE ARCHITECTURAL PLANS.
4. ON-SITE AND PUBLIC HANDICAP RAMP DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DOT STANDARD #24001. CURB DETAIL OR RAMP DETAIL RAMP LOCATION (DIMENSIONS AND ELEVATIONS) WILL BE PROVIDED AFTER THE INITIAL CITY REVIEW.
5. UNLESS OTHERWISE NOTED, ALL PAVEMENT MATERIALS SHALL BE YELLOW PANT, 4" WIDE.
6. WHERE CONCRETE PAVEMENT ABUTS B6-12 CONCRETE CURB & GUTTER, #6 TIE BARS SHALL BE INSTALLED AT 36-INCH CENTERS

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GRADING NOTES:

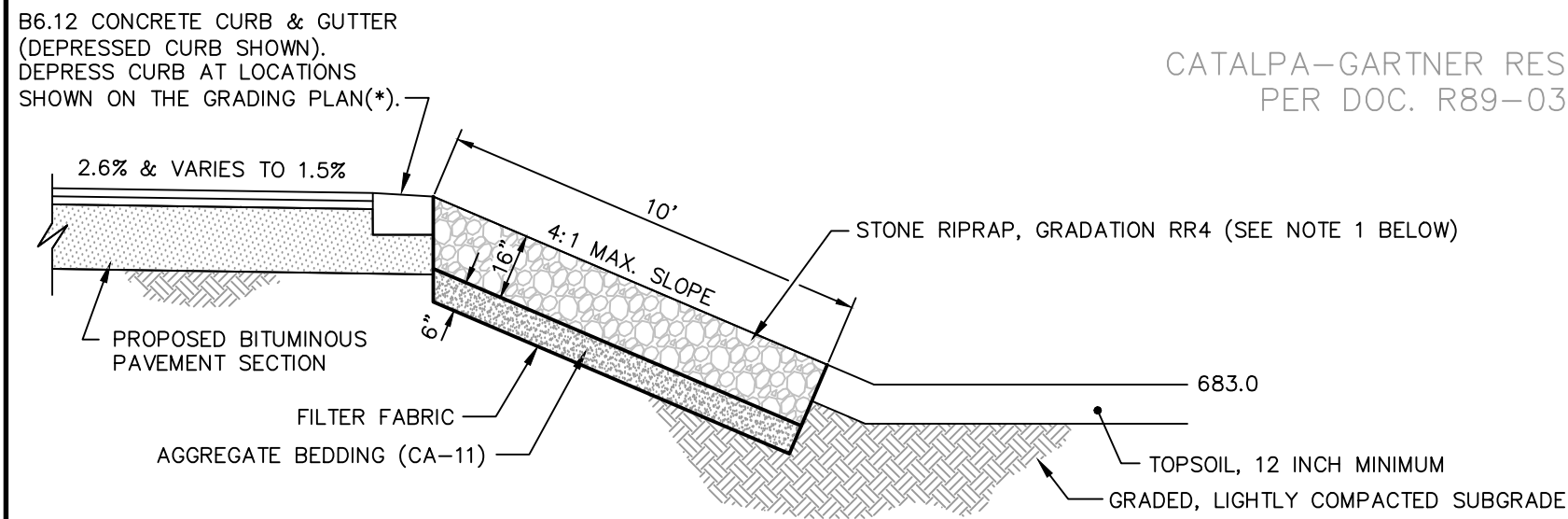
- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATION IN THE ILLINOIS URBAN MANUAL, LATEST EDITION. SEE SHEETS 11 AND 12 FOR STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND DETAILS.
- ALL GRADES DEPICTED ARE FINISHED GRADES. IN NON-PAVED AREAS, THE CONTRACTOR SHALL SUBTRACT 6 INCHES TO ALLOW FOR TOPSOIL/MULCH MATERIAL PLACEMENT AND 12 INCHES IN THE BEST MANAGEMENT PRACTICE FACILITY TO ALLOW FOR TOPSOIL PLACEMENT.
- THE CONTRACTOR SHALL PROVIDE INLET FILTER BASKETS IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLANS FOR ALL OPEN LID STRUCTURES TO MINIMIZE INTRUSION OF DEBRIS/SILT INTO THE STORM SEWER SYSTEM.
- THE ESTIMATED CONSTRUCTION SCHEDULE IS AS FOLLOWS:

TOPSOIL STRIPPING	SUMMER 2019
GRADING	SUMMER 2019
PAVING	SPRING 2020
LANDSCAPING	SPRING 2020

LANDSCAPE MATERIALS SHALL BE INSTALLED AS SOON AS POSSIBLE TO STABILIZE SITE.
- DROP TRASH ENCLOSURE FOUNDATION WALL AND FOOTING TO ACCOMMODATE THE PROPOSED GRADES. PROVIDE MINOR RETAINING WALL ADJACENT TO SERVICE WALK. INSTALL LOW/NO MAINTENANCE GROUND COVER WHERE SIDE SLOPES EXCEED 4 TO 1. SEE LANDSCAPE PLANS FOR DETAILS.
- SOIL EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE INSPECTED WEEKLY AND AFTER EACH 1/2" RAINFALL EVENT OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN THEIR FUNCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE CITY OF NAPERVILLE.
- DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. CONCRETE TRUCKS SHALL NOT BE PERMITTED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON SITE. SPECIFIC AREAS FOR THIS ACTIVITY SHALL BE DESIGNATED BY THE CONTRACTOR AND PROVIDED WITH ADEQUATE SILTATION BASINS AND OTHER FACILITIES TO ASSURE THAT DISCHARGE IS CONTAINED AND CLEANSSED BEFORE ENTERING THE RECEIVING STORM SEWER SYSTEM.
- ALL ADJACENT STREETS SHOULD BE KEPT CLEAR OF MUD/DEBRIS. THE CONTRACTOR SHALL INSPECT THE STREETS DAILY AND CLEAN THEM AS NECESSARY.
- STOCKPILES OF SOIL AND OTHER BUILDING MATERIALS TO REMAIN IN PLACE MORE THAN THREE (3) DAYS SHALL BE FURNISHED WITH EROSION AND SEDIMENT CONTROL MEASURES (I.E. PERIMETER SILT FENCE). STOCK PILES, NOT BEING ACTIVELY WORKED AND TO REMAIN IN PLACE 14 DAYS OR MORE SHALL RECEIVE TEMPORARY SEEDING. STRAW MULCH WITH NETTING OR EROSION CONTROL BLANKET SHALL BE USED ON SIDE SLOPES.
- TOP OF CURB GRADES DENOTED WITH AN ASTERISK (*) INDICATE WHERE THE TOP OF CURB WILL BE DEPRESSED 1-1/2 FEET ON EACH SIDE OF THE PAVEMENT STRIPE (THREE FEET IN TOTAL) TO ALLOW PARKING LOT RUNOFF TO SHEET DRAIN INTO BEST MANAGEMENT PRACTICE FACILITY. SEE LANDSCAPE PLAN FOR BEST MANAGEMENT PRACTICE SEEDING/PLANT MATERIAL.
- ON-SITE AND PUBLIC HANDICAP RAMP DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH IDOT STANDARD 424001.
- B6 CURB SHALL VARY IN HEIGHT THROUGH 10-FOOT RADIUS AND BE 12-INCH (TOP OF CURB TO PAVEMENT) ON TANGENT "EAST" OF BUILDING.
- TOP OF THE PROPOSED ELECTRIC SPLICE BOXES SHALL REMAIN AT THEIR EXISTING ELEVATIONS. THE CONTRACTOR SHALL USE CARE WHEN GRADING ADJACENT TO THE EXISTING BOXES.

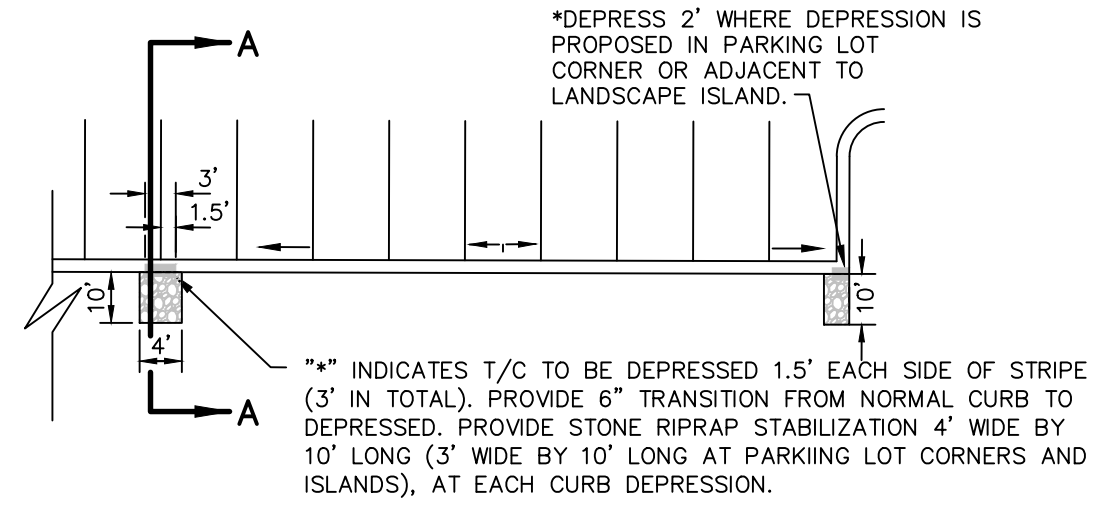
PERVIOUS/IMPERVIOUS CALCULATIONS:

	IMPERVIOUS AREA	PERVIOUS AREA	PROJECT AREA
EXISTING	93,540 S.F.	58,864 S.F.	152,404 S.F.
PROPOSED	103,074 S.F.	49,330 S.F.	152,404 S.F.
NET INCREASE	9,534 S.F.		
103,074 S.F. x 1.25 IN. x (1FT./12IN.) = 10,736 CU.FT. OF RUNOFF			
POST CONSTRUCTION VOLUME CONTROL BMP PROVIDED:			
WETLAND BASIN = 2,488 CU.FT.			
STORMTRAP SYSTEM = 8,307 CU.FT.			
TOTAL= 10,795 CU.FT.			



- THE STONE RIPRAP SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 281 OF THE IDOT STANDARD SPECIFICATIONS. GRADATION SHALL BE IN ACCORDANCE WITH ARTICLE 1005.01(C) WITH THE EXCEPTION THAT 100 PERCENT OF THE ROCK SIZE SHALL PASS 90 POUNDS. THE STONE RIPRAP STABILIZATION SHALL BE INSTALLED ONE INCH BELOW THE DEPRESSED CURB ELEVATION.
- SEE LANDSCAPE PLAN FOR SEEDING/PLANT MATERIAL.

SECTION A-A
(N.T.S.)



DEPRESSED CURB DETAIL
(N.T.S.)

ROAKE AND ASSOCIATES, INC.
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1230 E. Diehl Road, Suite 200, Naperville, IL 60563
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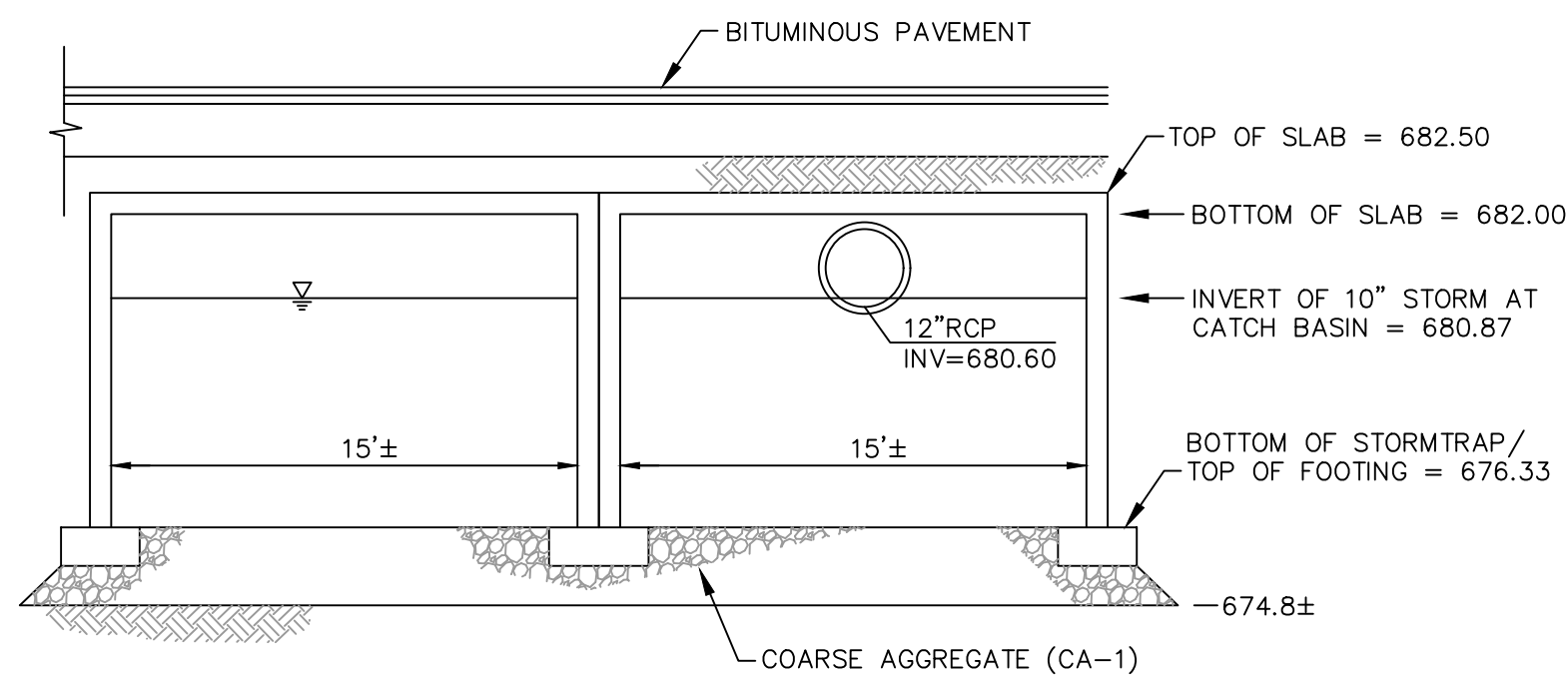
PREPARED FOR:
TARTAN REALTY GROUP, INC.
350 WEST HUBBARD STREET, #640
CHICAGO, ILLINOIS 60654
TEL. (312) 377-8375
FAX. (312) 377-8351

NO.			REVISIONS		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

THE SHOPPES ON WASHINGTON

GRADING PLAN - SOUTH

DRN./CKD. BY: SRH/JGC	FILE: 8534E	F.LD. BK./PG.: 273/38-39	SHEET NO. 18
SCALE: 1"=20'	DATE: 04/22/19	JOB NO.: 190-206	OF 18



SECTION B-B
(NTS)

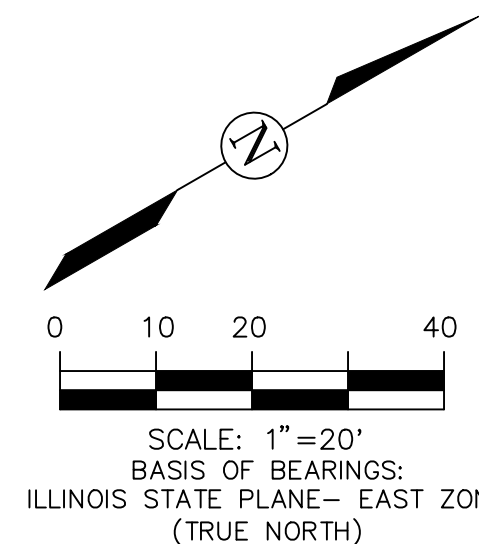
AGGREGATE BASE STORMTRAP SYSTEM FOR
VOLUME CONTROL BEST MANAGEMENT PRACTICES

8,307 CUBIC FEET PER PRELIMINARY CALCULATIONS BY STORMTRAP

NOTE: FINAL VOLUME WILL BE BASED ON SHOP DRAWINGS PREPARED
BY STORMTRAP, BUT WILL NOT BE LESS THAN THE TOTAL PVCBMP
REQUIRED FOR THE SITE MINUS THE WETLAND BASIN VOLUME.

PROPOSED WETLAND BASIN STORAGE

Elevation (FT)	Area (SF)	Volume (CF)	Total Volume (CF)
683.00	565.6	0	0
684.00	1052.7	797	797
685.00	1662.3	1346	2143
685.20	1794.2	346	2488



REVISIONS			REVISIONS		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

THE SHOPPES ON WASHINGTON

GRADING PLAN - NORTH

DRN./CKD. BY: SRH/JGC	FILE: 8534E	FLD. BK./PG.: 273/38-39	SHEET NO. 18
SCALE: 1"=20'	DATE: 04/22/19	JOB NO.: 190-206	7 OF 18

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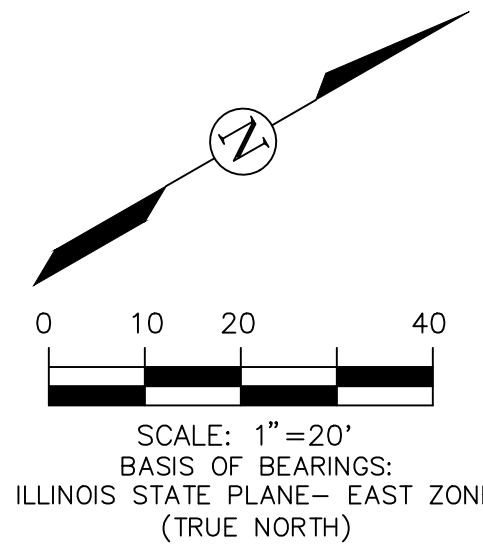
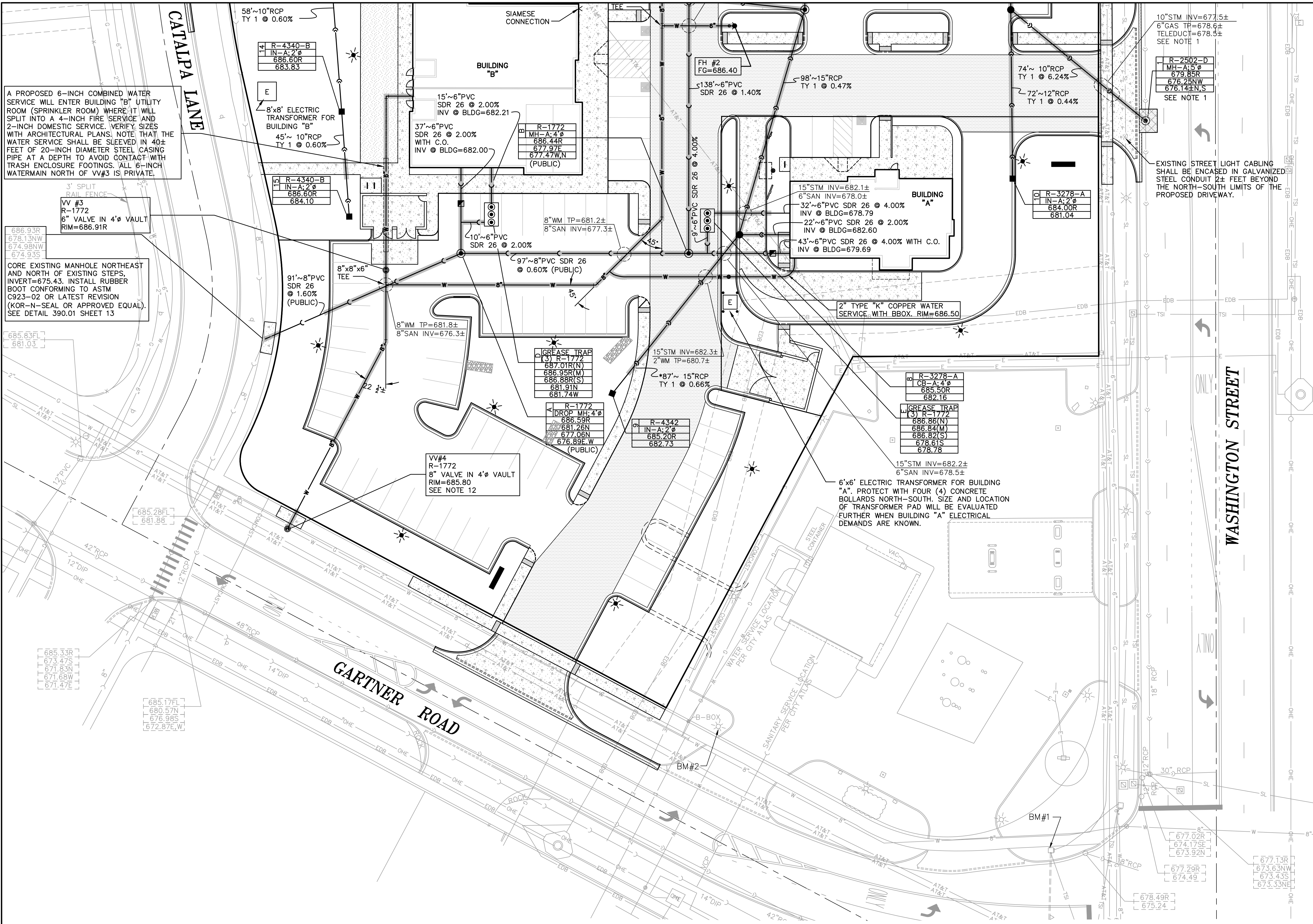


NO.			REVISIONS		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

THE SHOPPES ON WASHINGTON

UTILITY PLAN — SOUTH

DRN./CKD. BY: SRH/JGC	FILE: 8534E	FLD. BK./PG.: 273/38-39	SHEET NO. 8 OF 18
SCALE: 1"=20'	DATE: 04/22/19	JOB NO.: 190-206	



UTILITY NOTES:

- ALL PROPOSED UTILITY CROSSINGS WITH EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION.

THE PROPOSED LOCATION OF MANHOLE #1 AND THE ALIGNMENT OF THE PROPOSED 10-INCH STORM SEWER IS IN THE GENERAL HORIZONTAL AND VERTICAL ALIGNMENT OF THE EXISTING 8-INCH BLIND STORM SEWER OUTFALL DRAINING THE SUBJECT PROPERTY. PRIOR TO ORDERING THE MANHOLE, THE CONTRACTOR SHALL POT-HOLE THE EXISTING UTILITIES (TELEPHONE DUCTBANK, 6-INCH GAS, STREET LIGHT CABLE AND 18-INCH STORM SEWER) TO VERIFY LOCATION AND ELEVATION AND REPORT FINDINGS TO THE ENGINEER. ONCE THE LOCATION OF THE 18-INCH STORM SEWER IS DETERMINED, THE MANHOLE SHALL BE POURED SUCH THAT THE FRAME AND GRATE IS LOCATED IN THE FLOWLINE WITH THE NORTH-SOUTH OPENINGS FOR THE 18-INCH STORM SEWER PROPERLY LOCATED TO THE EAST.
- ALL PROPOSED DUCTILE IRON UTILITIES INCLUDING FITTINGS SHALL BE POLYWRAPPED.
- THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY/SERVICE EXTENSIONS 5 FEET OUTSIDE OF THE BUILDING ENVELOPES. PIPE LENGTH CALLOUTS HAVE BEEN DENOTED FROM THE FACE OF BUILDING.
- "**" DENOTES STORM SEWER TO BE CONSTRUCTED WITH REINFORCED CONCRETE LOW-HEAD PRESSURE PIPE (ASTM C361) WITH JOINTS FOR CIRCULAR CONCRETE SEWER USING RUBBER GASKETS (ASTM C443).
- ALL BENDS SHALL BE PROVIDED WITH "MEGA-LUG" TYPE FLANGES AND SHALL HAVE PROPER BLOCKAGE.
- THE CONTRACTOR SHALL ROTATE NEW HYDRANTS TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC UTILITIES. ALL RETAINER GLANDS, WHEN REQUIRED TO RESTRAIN VALVES, FITTINGS HYDRANTS, AND PIPE JOINTS, SHALL BE MECHANICAL JOINT WEDGE ACTION TYPE MEGALUG 1100 SERIES AS MANUFACTURED BY EBBA IRON, INC. OR UNI-FLANGE BLOCKBUSTER 1400 SERIES AS MANUFACTURED BY FORD METER BOX CO. AND SHALL BE FOR USE ON DUCTILE IRON PIPE CONFORMING TO ANSI/AWWA C151/A21.51, FOR NOMINAL PIPE SIZES 3" THRU 48".
- GRADE RING ELEVATIONS FOR ALL HYDRANTS HAVE BEEN SET IN CONFORMANCE WITH THE HYDRANT DETAIL SHOWN IN THESE PLANS.
- THE CONTRACTOR SHALL PROVIDE INLET FILTER BASKETS BENEATH ALL OPEN LID STRUCTURES TO MINIMIZE INTRUSION OF DEBRIS/SILT INTO THE STORM SEWER SYSTEM.
- UPON COMPLETION OF THE UTILITY INSTALLATIONS, THE PUBLIC RIGHT OF WAY SHALL BE RESTORED TO ITS ORIGINAL CONDITION. THIS SHALL INCLUDE BUT NOT BE LIMITED TO 6 INCH TOPSOIL PLACEMENT, SEEDING, EROSION CONTROL BLANKETS AND SIDEWALK INSTALLATION.
- SITE LIGHTING STANDARDS HAVE BEEN SHOWN FOR LOCATION ONLY. SEE LIGHTING/PHOTOMETRIC SUBMITTAL PREPARED BY OTHERS.
- THE DETENTION VAULT/BMP CONFIGURATION IS ASSUMED AND WILL BE FINALIZED WITH SHOP DRAWINGS PREPARED BY STORMTRAP.
- REVIEW OF THE CITY'S WATER ATLAS AND OBSERVATIONS MADE IN THE FIELD INDICATE THE EXISTING 6-INCH VALVE IN VAULT CAN BE ISOLATED AND REMOVED. THE CONTRACTOR SHALL CUT IN AN 8"x8"x8" TEE (IF ONE DOESN'T CURRENTLY EXIST) AND INSTALL AN 8-INCH VALVE IN VAULT IN THE GENERAL LOCATION SHOWN. AVOID PLACEMENT IN THE PUBLIC SIDEWALK.
- UNLESS LABELED "(PUBLIC)", ALL SANITARY SEWERS, MANHOLES, CLEANOUTS, ETC. SHALL BE PRIVATELY OWNED AND MAINTAINED.
- ALL PROPOSED SANITARY SERVICES SHALL INCLUDE A CLEANOUT WITH TEE/RISER ENCLOSED IN A RISERBOX, EJIW 1566 (SEE SHEET 16 FOR DETAIL) OR APPROVED EQUAL. THE CLEANOUT SHALL BE LOCATED A MINIMUM OF 5 FEET FROM PROPOSED FOUNDATION WALLS.

[illegible]

 **ROAKE AND ASSOCIATES, INC.**
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Tel. (877) 963-6026 Fax. (630) 963-6027

REVISIONS					
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1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

UTILITY PLAN - NORTH

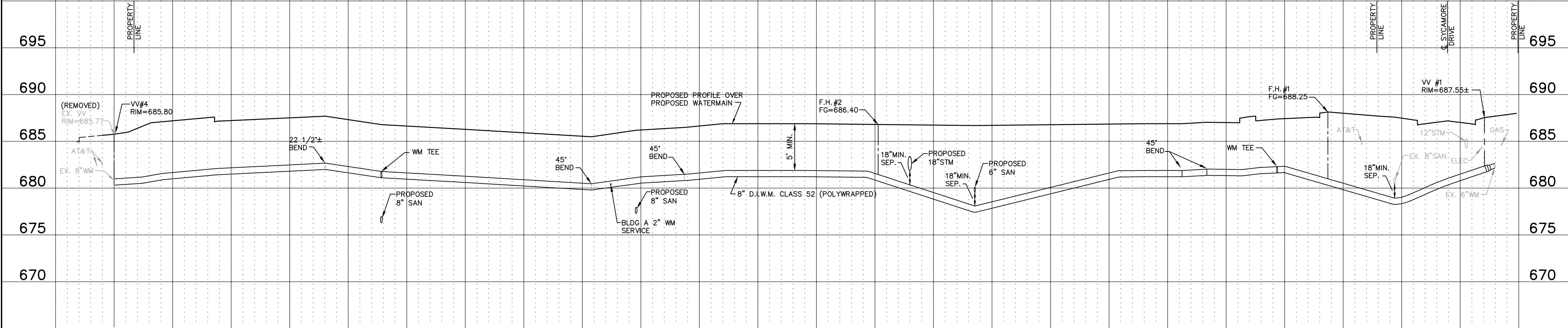
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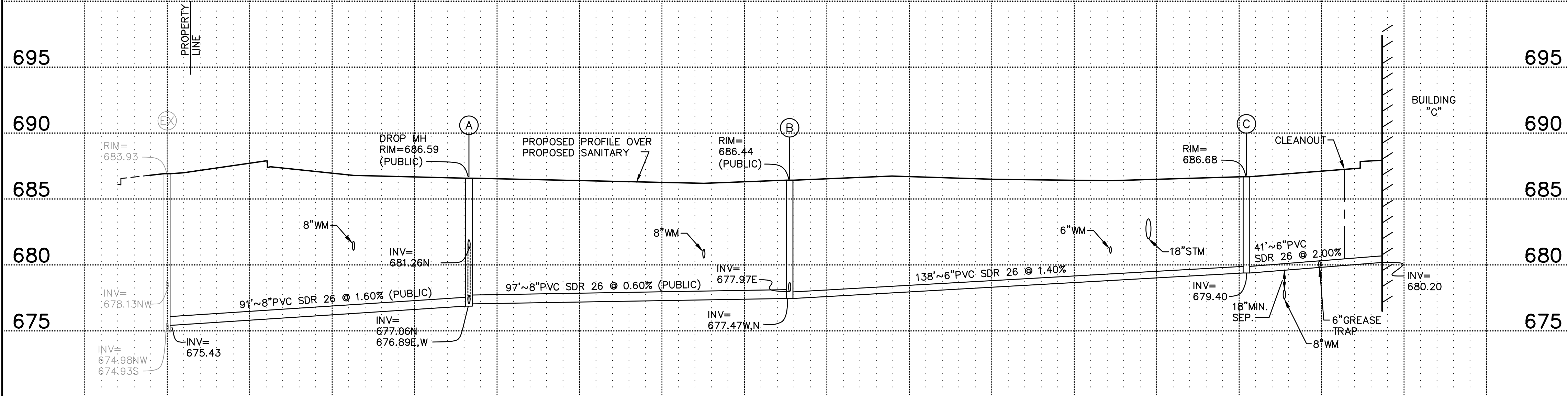
SITE WATERMAIN (MAIN LOOP)

SCALE: (HORZ.) 1"=20'; (VERT.) 1"=5'



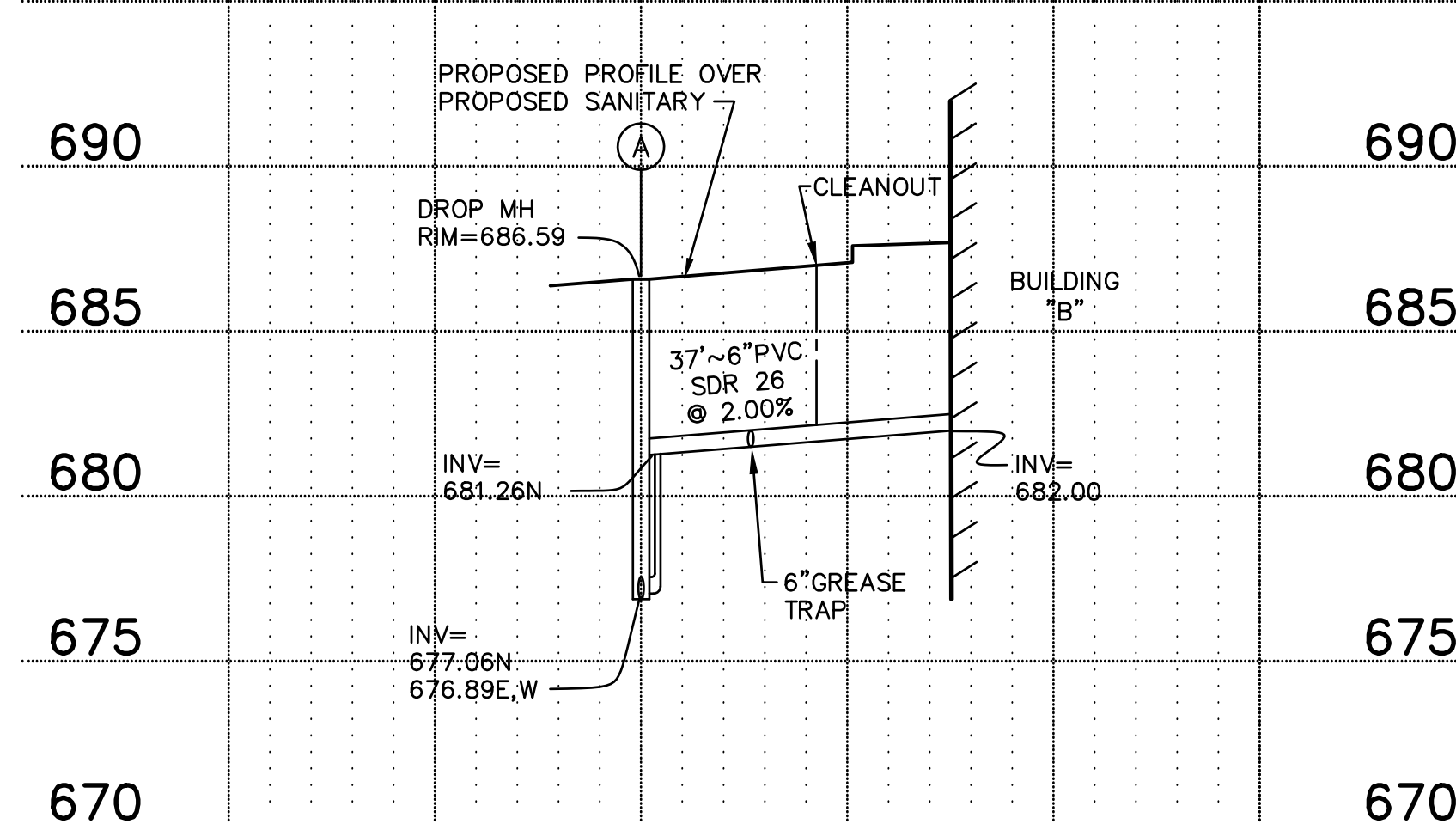
SITE SANITARY (MAIN)

SCALE: (HORZ.) 1"=20'; (VERT.) 1"=5'



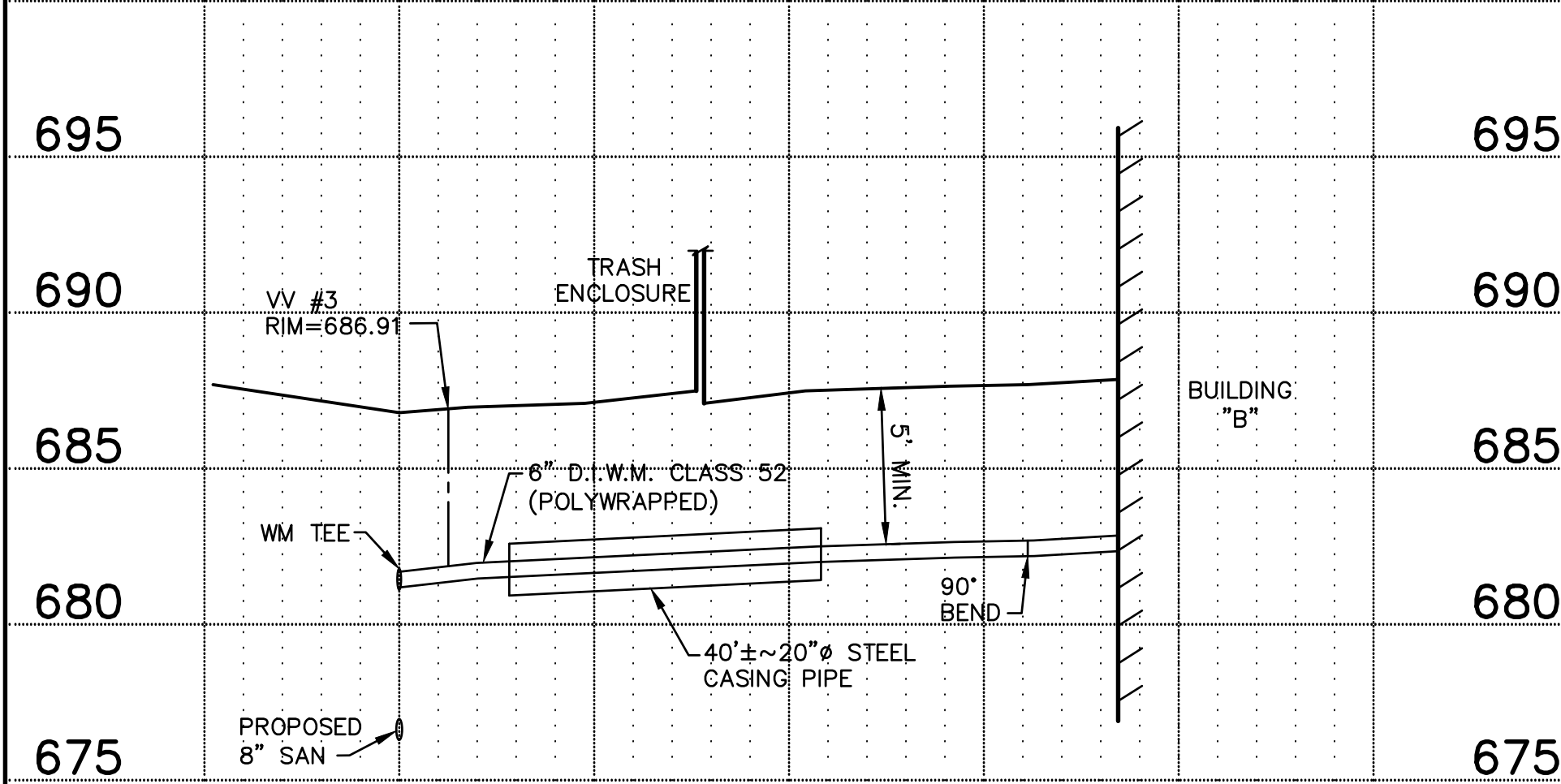
BUILDING "B" SANITARY SERVICE PROFILE

SCALE: (HORZ.) 1"=20'; (VERT.) 1"=5'



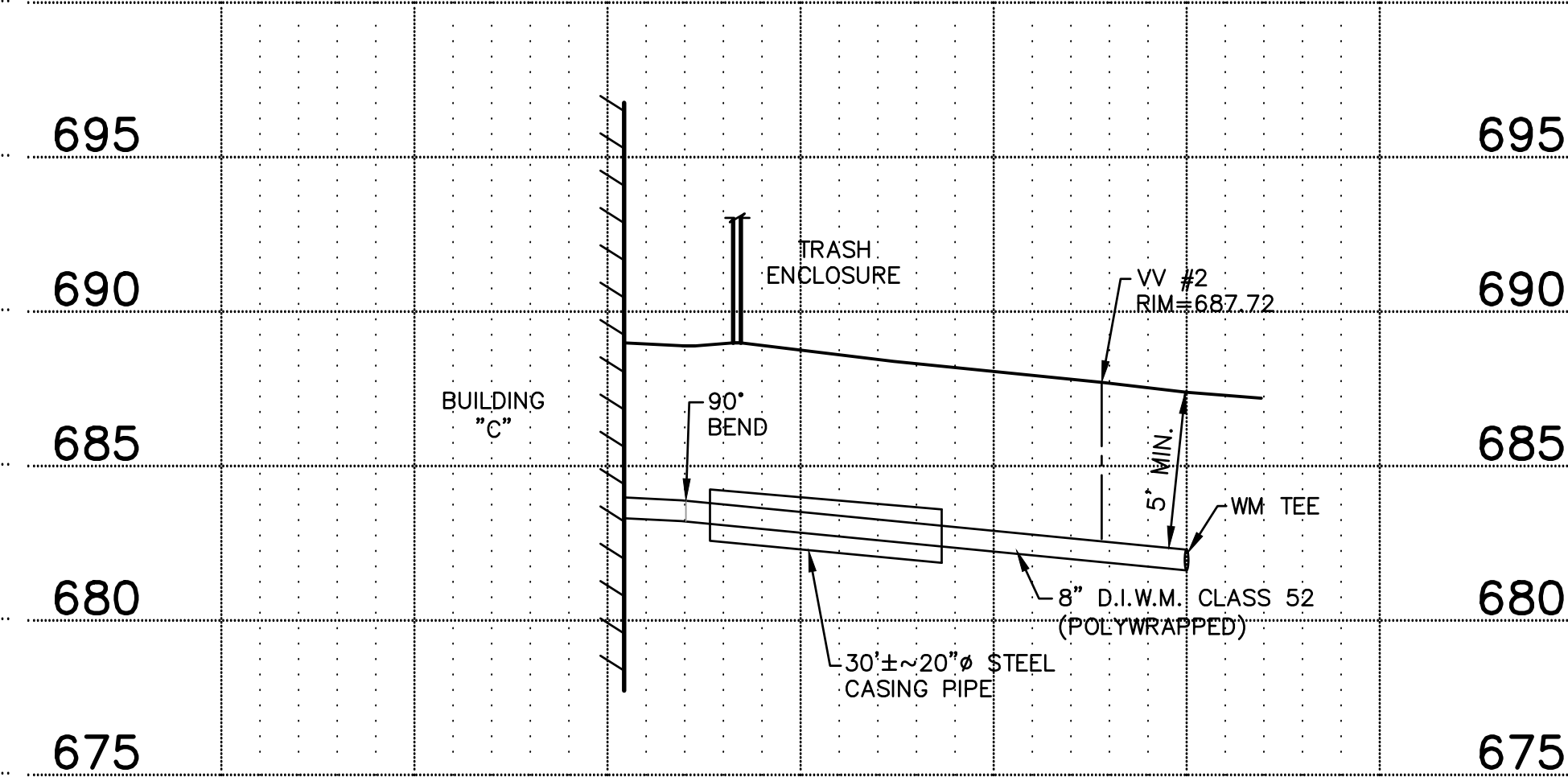
BUILDING "B" WATERMAIN SERVICE PROFILE

SCALE: (HORZ.) 1"=20'; (VERT.) 1"=5'



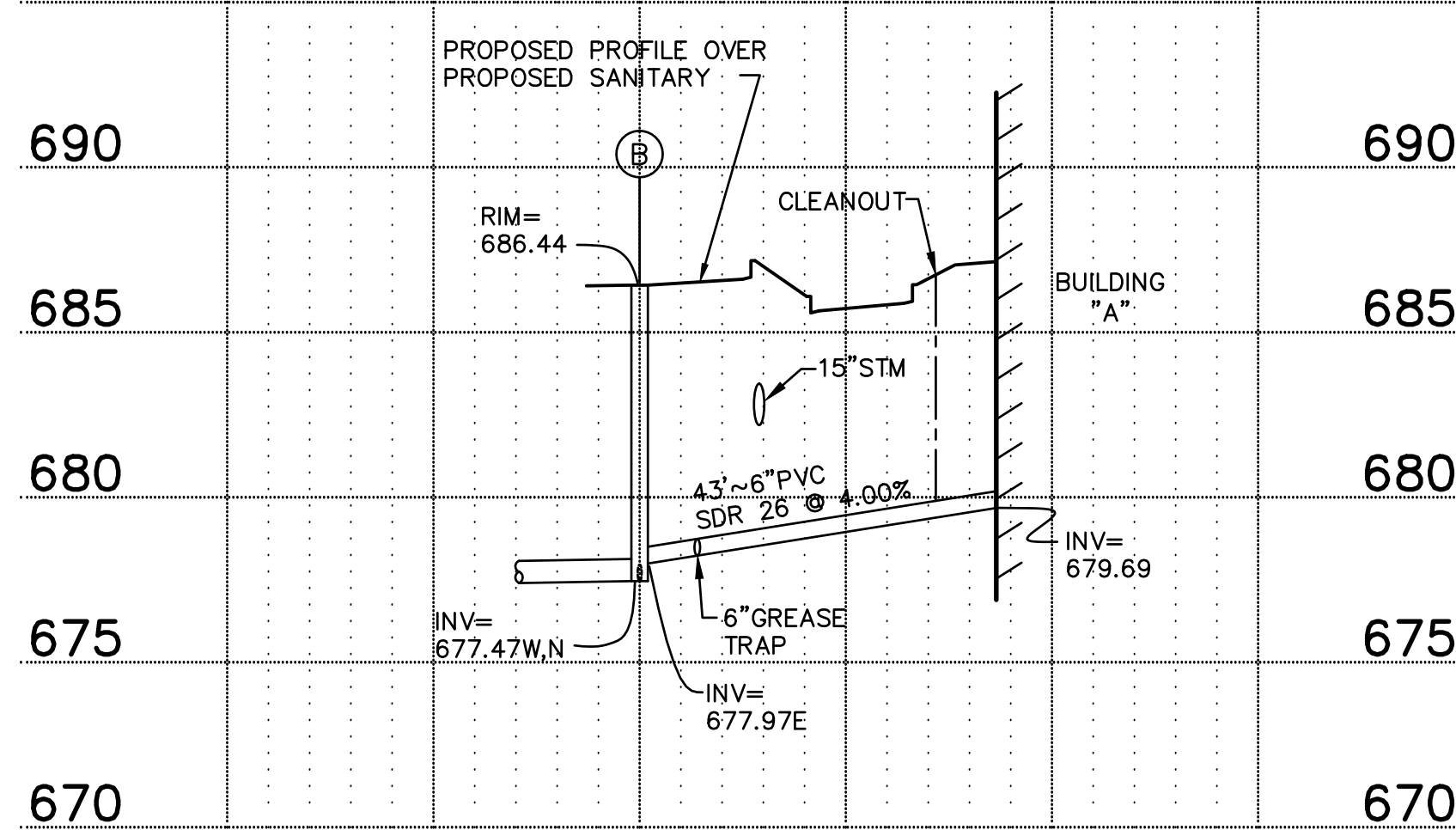
BUILDING "C" WATERMAIN SERVICE PROFILE

SCALE: (HORZ.) 1"=20'; (VERT.) 1"=5'



BUILDING "A" SANITARY SERVICE PROFILE

SCALE: (HORZ.) 1"=20'; (VERT.) 1"=5'



REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

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PREPARED FOR:
TARTAN REALTY GROUP, INC.
350 WEST HUBBARD STREET, #640
CHICAGO, ILLINOIS 60654
TEL. (312) 377-8375
FAX. (312) 377-8351

REVISIONS			REVISIONS		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

THE SHOPPES ON WASHINGTON
STORMWATER POLLUTION PREVENTION PLAN, SPECIFICATIONS & GENERAL NOTES

DRN./CKD. BY: SRH/JGC

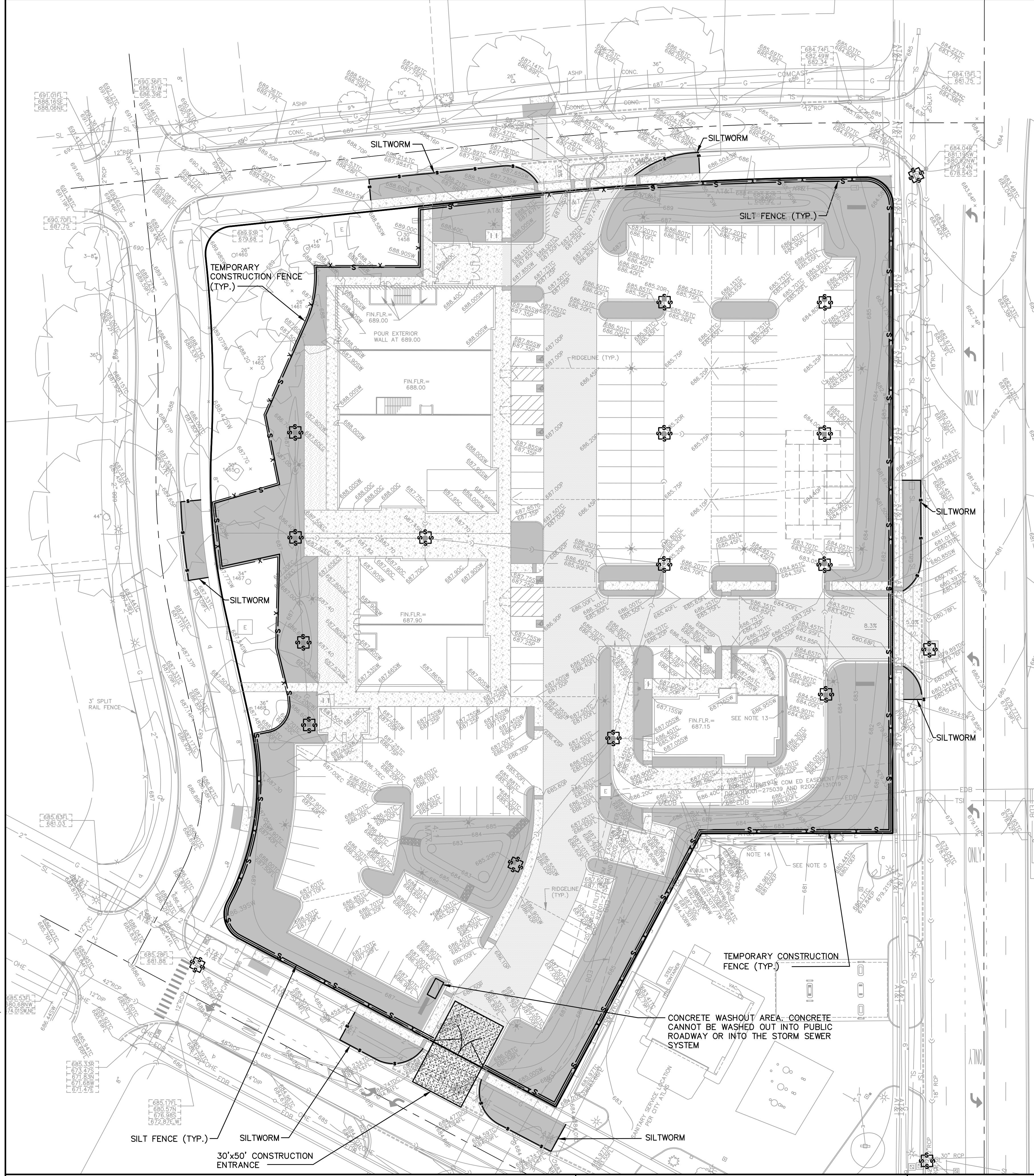
FILE: 8534E

FLD. BK./PG.: 273/38-39

SCALE: 1"=30'

SHEET NO.

11 OF 18



NOTES:

1. FILTER BASKETS SHALL BE PROVIDED BENEATH ALL OPEN LID STRUCTURES, INCLUDING CURBLINE INLETS. FOUR SIDED SILT FENCE SHALL BE STAKED AROUND ALL YARD INLETS.
2. THE CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE AT ALL TIMES DURING THE COURSE OF CONSTRUCTION AND PREVENT STORM WATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS.
3. DURING EXTENDED DRY PERIODS, THE CONSTRUCTION AREA(S) MAY NEED TO BE WATERED DOWN TO PREVENT THE BLOWING OF SOIL FROM THE SITE.
4. DURING CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE UTILIZED TO MINIMIZE THE TRACKING OF DIRT ONTO THE PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP PUBLIC STREET PAVEMENT CLEAN OF DIRT AND DEBRIS. ANY DIRT THAT IS TRACKED ONTO THE PUBLIC STREETS SHALL BE REMOVED THE SAME DAY.

This stormwater pollution prevention plan (SWPPP) has been prepared to comply with the provisions of NPDES ILR10 Construction General Permit (CGP) issued by the Illinois Environmental Protection Agency for stormwater discharges from construction site activities.

1. Site Description.

The following is a description of the construction activity that is the subject of this plan.

- A. The proposed improvement consists of the construction of three buildings, parking lot and utilities on a 3.5 acre site.

The construction site activities for the site improvements will include: topsoil excavation and stockpiling, earth excavation and the placement of embankment materials, installation of sanitary sewers, storm sewers, watermain, and other municipal infrastructure such as telecommunications, gas and electric services, curb & gutter, base course and asphalt and/or concrete pavement, re-spread of topsoil over all disturbed pervious areas, stabilization of pervious areas with seed and/or other landscaping materials, soil erosion and sedimentation control measures and other activities that may be necessary to protect adjacent properties and downstream watercourses from damage.

- B. The expected sequence of activities that will cause significant disturbance/ disruption of the site are as follows: site clearing; topsoil excavation and stockpiling; earth excavation and placement of earth embankment; utility installation and restoration of disturbed surfaces.

Prior to commencement of any site disruption activity, silt fence, any required down-slope protection and the stabilized construction entrance must be installed. Additional soil erosion and sediment control measures shall be installed as construction activity progresses, as noted on the plans.

- C. The total area of the construction site is approximately 3.5± acres. The total area of the site to be disturbed is estimated to be 3.5± acres.

- D. The estimated stormwater runoff coefficients are contained in the project design narrative on file with the local agency having jurisdiction over this project. Information regarding soil classifications, estimated runoff and detailed computations for the management of stormwater runoff are contained in the project design narrative, which is incorporated by reference and made a part of this plan.

2. Controls

The plan addresses various controls that must be implemented for each of the major construction activities described above. For each of the controls described below, the contractor(s) shall be responsible for its implementation. Each contractor has signed this plan acknowledging responsibility for the implementation and on-going maintenance of this plan. A signed copy of the plan must be maintained on the site at all times.

- A. Soil Erosion and Sediment Controls.

1. Stabilization Practices. Existing vegetation should be preserved as long as possible. Disturbed areas should be stabilized as soon as possible. Stabilization measures shall be implemented as soon as practical in portions of the site where construction activities have temporarily or permanently ceased, but in no case longer than 14 days in areas where construction activity will not resume for 21 days, or more. Where snow cover precludes stabilization activities, or other conditions preventing implementation, stabilization measures shall be implemented as soon as conditions permit.

The following interim and permanent stabilization practices, as a minimum, shall be employed to stabilize disturbed areas of the site: Temporary Seeding, Permanent Seeding; Channels and Swales; Stabilized Construction Entrance(s); and Barrier Filters.

2. Structural Practices. The following structural practices shall be implemented to the extent possible to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from the exposed areas of the site: Siltation Basins; Storm Sewer Systems; Vegetated Drainage Swales; Permanent Seeding.

- B. Other Controls.

1. Waste Disposal. Solid waste material, including trash, construction debris, excess construction materials, machinery, tools and other items shall be collected and disposed of off-site by the contractor in an approved manner. The contractor is responsible for all permits required for such disposal. On-site burning shall not be permitted. No solid materials, including building materials, shall be discharged into the waters of the state, except as authorized by appropriate permits. This plan shall comply with all applicable state and/or local waste disposal, sanitary sewer and/or septic system regulations.
2. Sanitary Waste. Sanitary waste shall be collected from portable units provided by the contractor a minimum of two times per week to avoid overflowing and maintain sanitary conditions around the unit.
3. Petroleum Products. All petroleum products stored on-site shall be stored in approved containers. All fueling sources shall have spill kits immediately available.

4. Concrete Trucks. Concrete trucks shall not be permitted to wash out or discharge surplus concrete or drum wash water on the site. Specific areas for this activity shall be designated by the contractor and provided with adequate siltation basins and other facilities to assure that discharge is contained and cleaned before entering the site storm water system.

5. De-watering. All discharges of water contaminated with silt or sediment shall be made to a portable or permanent sediment basin to assure that all suspended solids are removed prior to flows leaving the construction site. De-watering directly into field lines or stormwater structures is prohibited.

- C. Approved State or Local Plans.

The management practices, controls and provisions of this plan shall be at least as protective as the requirements contained in the IEPA's Standard Specifications for Soil Erosion and Sediment Control, current edition, Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control, Illinois Urban Manual, current edition, and any governing local agency ordinances. Requirements specified in sediment and erosion control plans, permits, or stormwater management site plans or site permits approved by local agencies that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under this permit, incorporated by reference and enforceable under this permit even though they may not be specifically included in the plan. The contractor is responsible for the installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the governing local agency.

3. Maintenance.

The following procedures shall be used to maintain, in good condition, erosion and sedimentation control measures, and other protective measures identified in this plan and the standard specifications.

- a. Stabilized Construction Entrance: The entrance shall be maintained to prevent tracking of sediment onto public streets. Maintenance shall include top-dressing with additional stone removal and replacement of the top layer of stone, or washing the entrance. Any sediment deposited on public right-of-way shall be removed immediately. Adjacent public streets shall be swept frequently, if not daily, to eliminate dust and sediments.

- b. Vegetative Control Measures: The vegetative growth associated with temporary and permanent seeding, sodding, vegetative channels, vegetative filters, etc. shall be maintained periodically and supplied with adequate water and fertilizer nutrients. If necessary, the vegetative cover shall be removed and re-seeded, as required.

- c. Sediment Basins and Sediment Traps: Sediments shall be removed when the sediment occupies 40-50% of the original capacity. In no instance shall the sediment be allowed to build up to within one-foot of the outlet elevation. Basins shall be cleaned to restore their original capacity.

- d. Silt Filter Fence: Any damaged silt fence shall be repaired to meet the original design intent or removed and replaced, as necessary.

- e. Inlet Filters: Inlet Filters (geotextile fabric) shall be placed in all open-lid storm structures to prevent silt and other construction materials from entering the storm sewer system. Inlet Filters shall be inspected after each rainfall event and immediately repaired or replaced, as necessary.

- f. Riprap Outlet Protection: Riprap outlet protection shall be inspected after experiencing high flows for any scouring beneath or along the edges of the riprap, or for any of the riprap material that may have become dislodged. Repairs shall be implemented immediately.

4. Inspections.

The Contractor, or Contractors Representative, shall provide personnel to inspect disturbed areas of the construction site, which have not been finally stabilized and accepted, structural control measures, and locations where vehicles enter and exit the site. Such inspections shall be conducted at least once every seven days and within 24 hours of the end of a 1/2" or greater rainfall or equivalent snowfall.

- a. Disturbed areas and areas used for storage of materials and equipment that are exposed to precipitation shall be inspected for evidence of, or the potential for pollutants entering the drainage system. Erosion and sedimentation control measures identified in the plan shall be observed to assure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impact to receiving waters and adjacent properties. Locations where vehicles enter or leave the site shall be inspected for evidence of off-site sediment tracking.

- b. Based on the results of the inspection, the description of potential pollutant sources identified in section 1 and pollution prevention measures identified in section 2

shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within seven (7) calendar days following the inspection.

- c. A report summarizing the scope of the inspection, names and qualifications of the personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with (b) above shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed by the contractors designated "qualified individual" and copies forwarded to the Engineer and Owner.

- d. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Contractor shall complete and file an "Incidence of Non-compliance" (ION) Report for the identified violation. The Contractor shall use forms provided by IEPA and shall include specific information on the cause of non-compliance, actions which were taken to prevent any further causes of non-compliance and a statement detailing any environmental impact which may have resulted from the non-compliance. All reports of non-compliance shall be signed by a responsible authority (Contractor) in accordance with the General Permit. The report shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control Attn:
Compliance Assurance Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

(WITH COPIES SENT TO THE OWNER AND ENGINEER)

5. Non-Storm Water Discharges.

Except for flows from fire-fighting activities, sources of non-storm water that may be combined with storm water discharges associated with the activity addressed in this plan are as follows:

1. Water main flushing
2. Fire hydrant flushing
3. Uncontaminated groundwater (from de-watering activities)
4. Watering for dust control
5. Irrigation drainage for vegetative growth for seeding, etc.

The pollution measures specified in the plan shall be implemented for non-stormwater discharges from these areas which erosion due to irrigation of seeding shall be considered minor.

Detailed Requirements

Construction Entrance

1. This item shall consist of the construction of a temporary construction entrance and mud track at a location designated by the ENGINEER. Generally, the new roadway sub-grade adjacent to the existing roadway shall be over-excavated to allow the placement of 12" CA-1 aggregate, for a width of 30 feet and minimum length perpendicular to the existing pavement of 50 feet. The surface elevation of the temporary construction entrance will be at the sub-grade elevation for the proposed roadway to allow future placement of the roadway base course without disturbing the temporary construction entrance.
2. Soil erosion and sedimentation control.

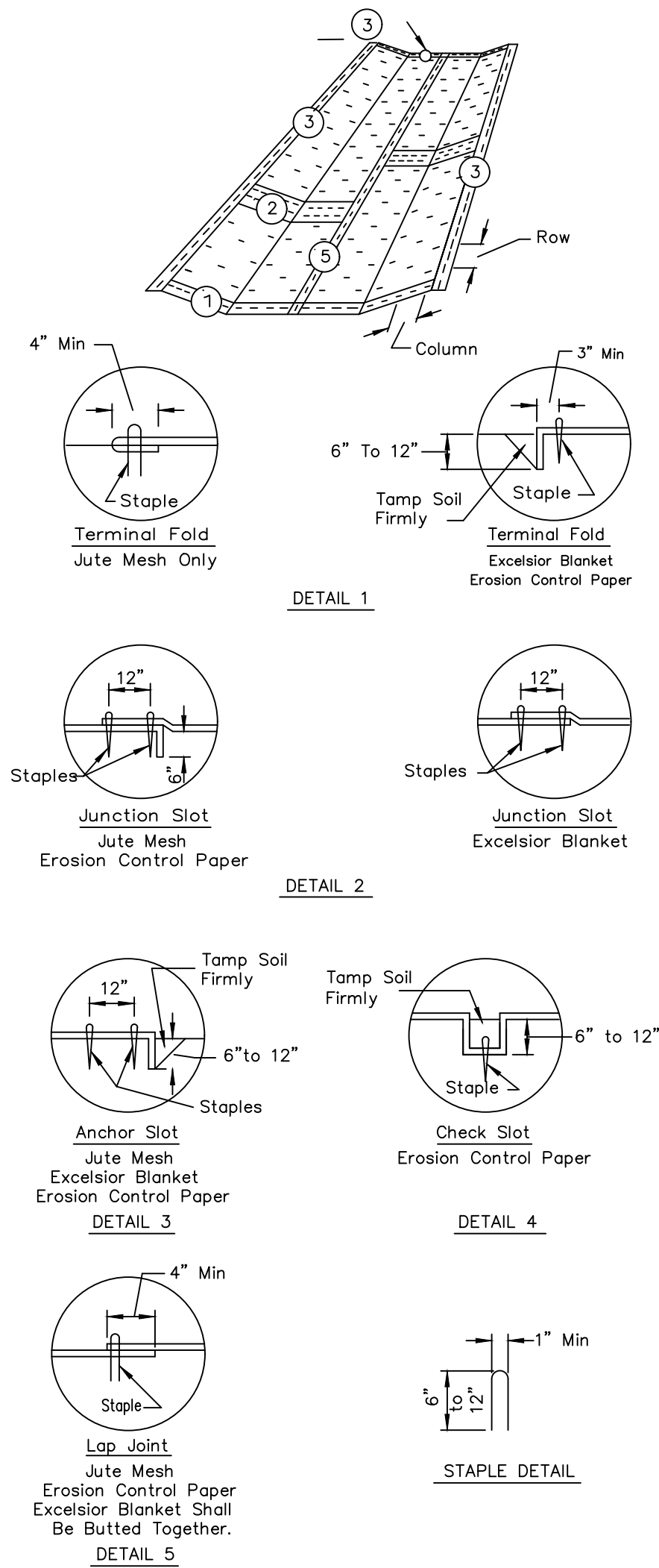
- a. All open lid drainage structures located in yard and storm water detention areas will have silt box inlet protection around their frames during construction, until such a time that the landscaping is in place and effectively preventing potential siltation of these structures. Inlet Filters shall be placed beneath all open lids.

- b. Seeding shall consist of the mixtures contained in the Soil Protection Chart, General Specifications and Schedule of Prices.

1. The seedbed (which includes all areas to be landscaped) shall be adequately prepared for receiving seed. All foreign materials shall be disposed of, and lumps shall be pulverized and graded in an acceptable workmanlike manner.
2. Fertilizer shall consist of 12% Nitrogen, 12% Phosphorus, and 12% Potassium, unless otherwise approved by the ENGINEER and shall be spread at a rate of application of 270 lbs. per acre.
3. Mulch shall consist of straw material and be free of materials harmful to seed growth.
4. Erosion control blankets shall be furnished and installed in accordance with Section 251 of the Standard Specifications for Road and Bridge Construction - Excelsior Blanket. Silt filter fence shall be furnished and installed in accordance with Section 280 of the Standard Specifications for Road and Bridge Construction.

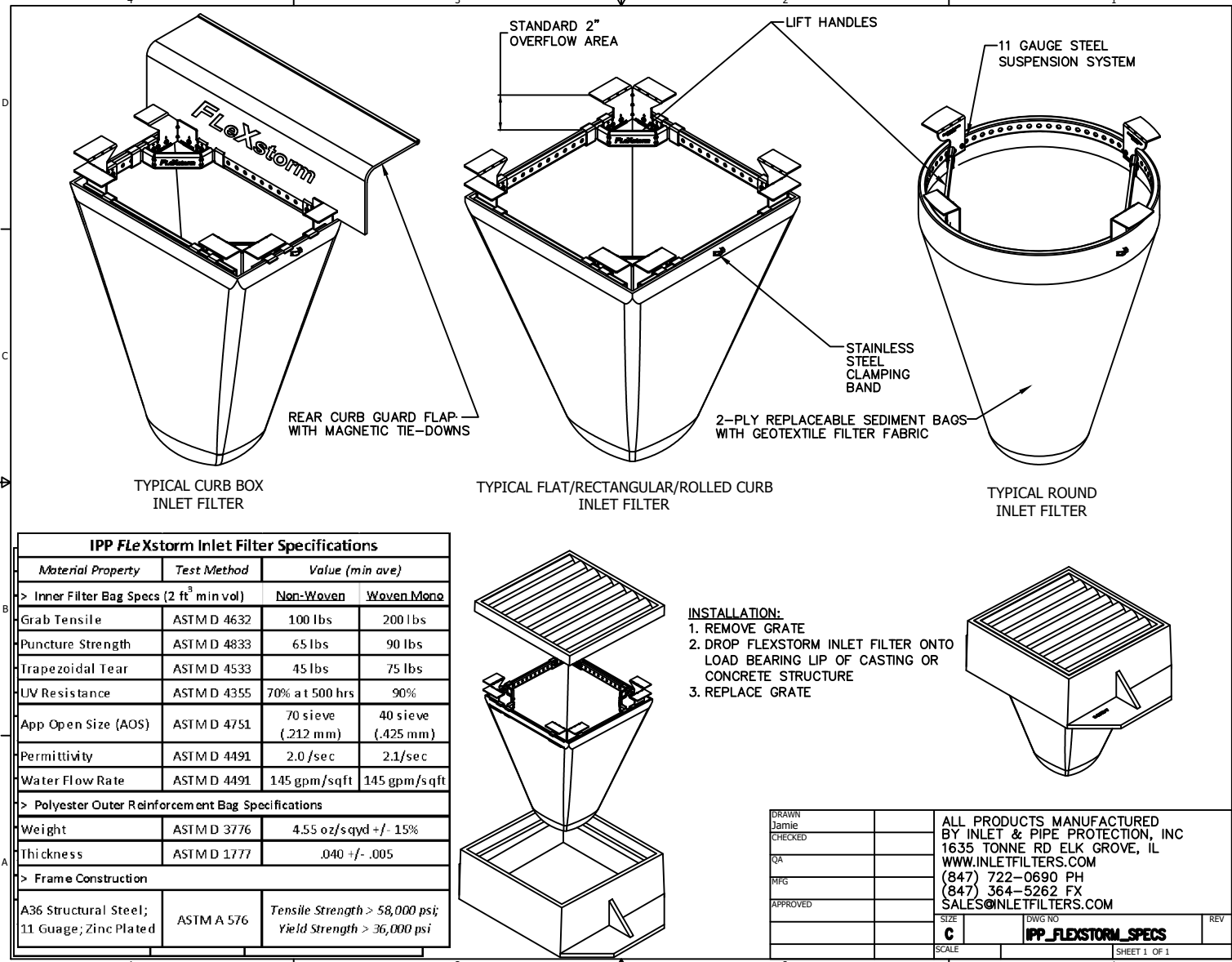
- c. The estimated construction schedule is as follows:
- | | |
|-------------------|-------------|
| Topsoil stripping | SUMMER 2019 |
| Grading | SUMMER 2019 |
| Paving | SPRING 2020 |
| Landscaping | SPRING 2020 |

EROSION BLANKET PLAN



- NOTES:
- On erosion control paper, check slots, in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
 - Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4' x 225' roll of material and 125 staples are required per 4' x 150' roll of material.
 - Erosion control material shall be placed loosely over ground surface. Do not stretch.
 - All terminal ends and transverse laps shall be stapled at approximately 12' intervals.

INLET PROTECTION



SOIL PROTECTION CHART

STABILIZATION TYPE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
PERMANENT SEEDING			A			*	*					
DORMANT SEEDING	D									D		
TEMPORARY SEEDING			C			D						
SODDING			E									
MULCHING	F											

- A. KENTUCKY BLUEGRASS 90 LBS/AC MIXED WITH PERENNIAL RYEGRASS 30 LBS/AC
 B. KENTUCKY BLUEGRASS 135 LBS/AC MIXED WITH PERENNIAL RYEGRASS 45 LBS/AC +2 TONS STRAW MULCH/AC
 C. SPRING OATS 100 LBS/ACRE
 D. WHEAT OR CEREAL RYE 150 LBS./ACRE
 E. SOD
 F. STRAW MULCH 2 TONS/ACRE
- IRRIGATION NEEDED DURING JUNE AND JULY
 • IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD

Grading Contractor Certification:

(Company name)
 I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with the industrial activity from the construction site identified as part of this certification.

(Name)
 (Title) (Date)

Underground Contractor Certification:

(Company Name)
 I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with the industrial activity from the construction site identified as part of this certification.

(Name)
 (Title) (Date)

Paving Contractor Certification:

(Company name)
 I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with the industrial activity from the construction site identified as part of this certification.

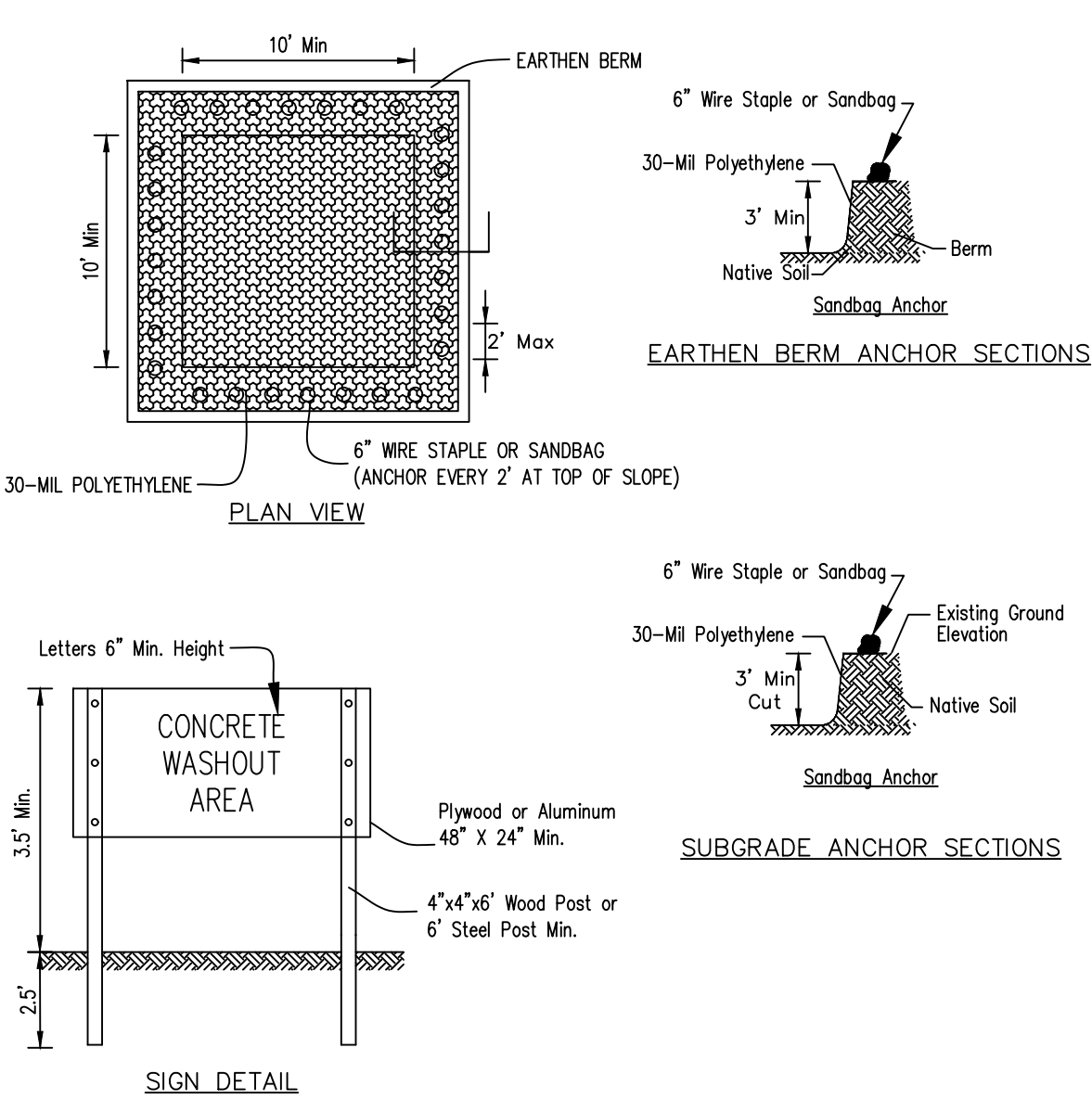
(Name)
 (Title) (Date)

Landscaping Contractor Certification:

(Company Name)
 I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with the industrial activity from the construction site identified as part of this certification.

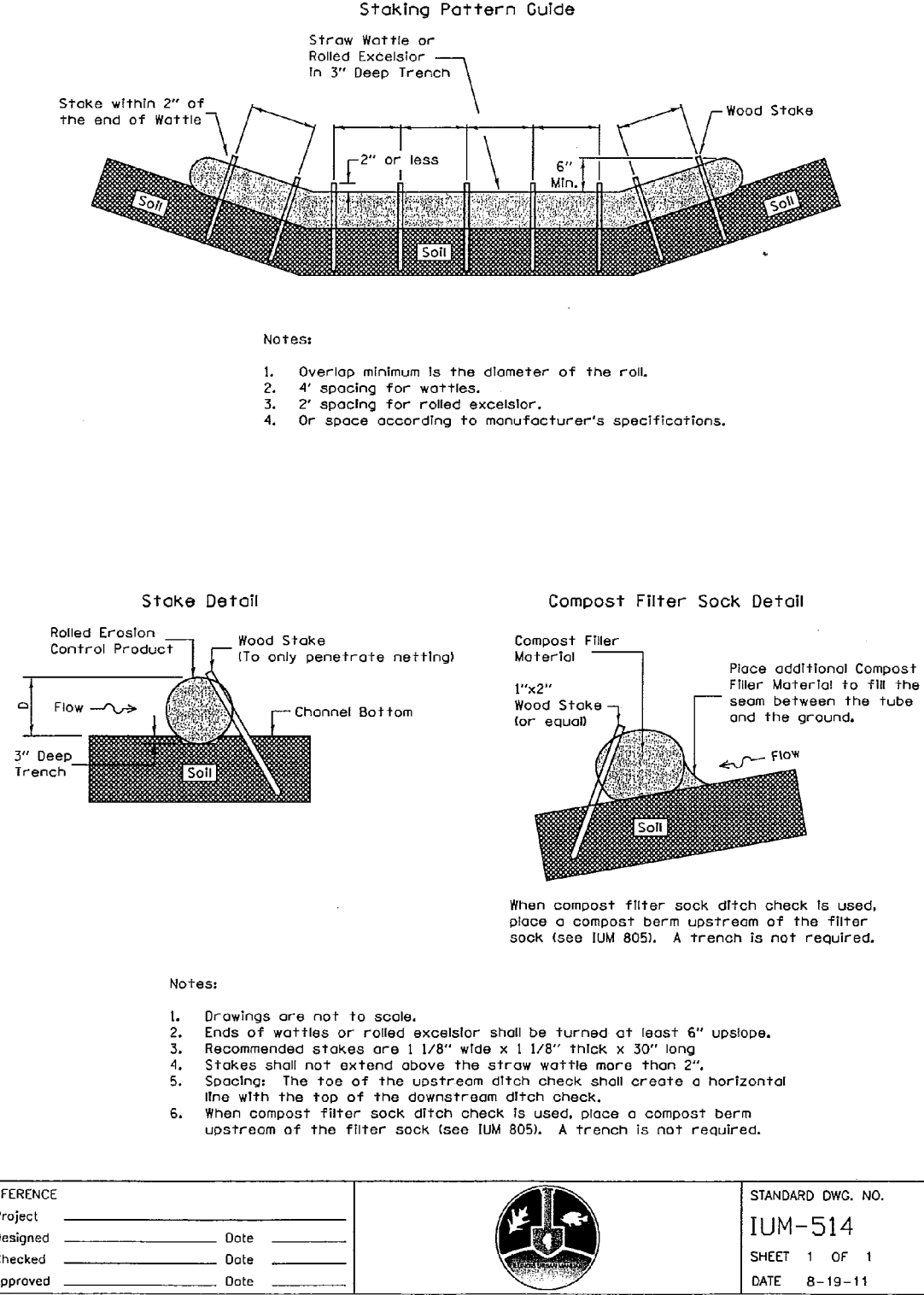
(Name)
 (Title) (Date)

TEMPORARY CONCRETE WASHOUT FACILITY

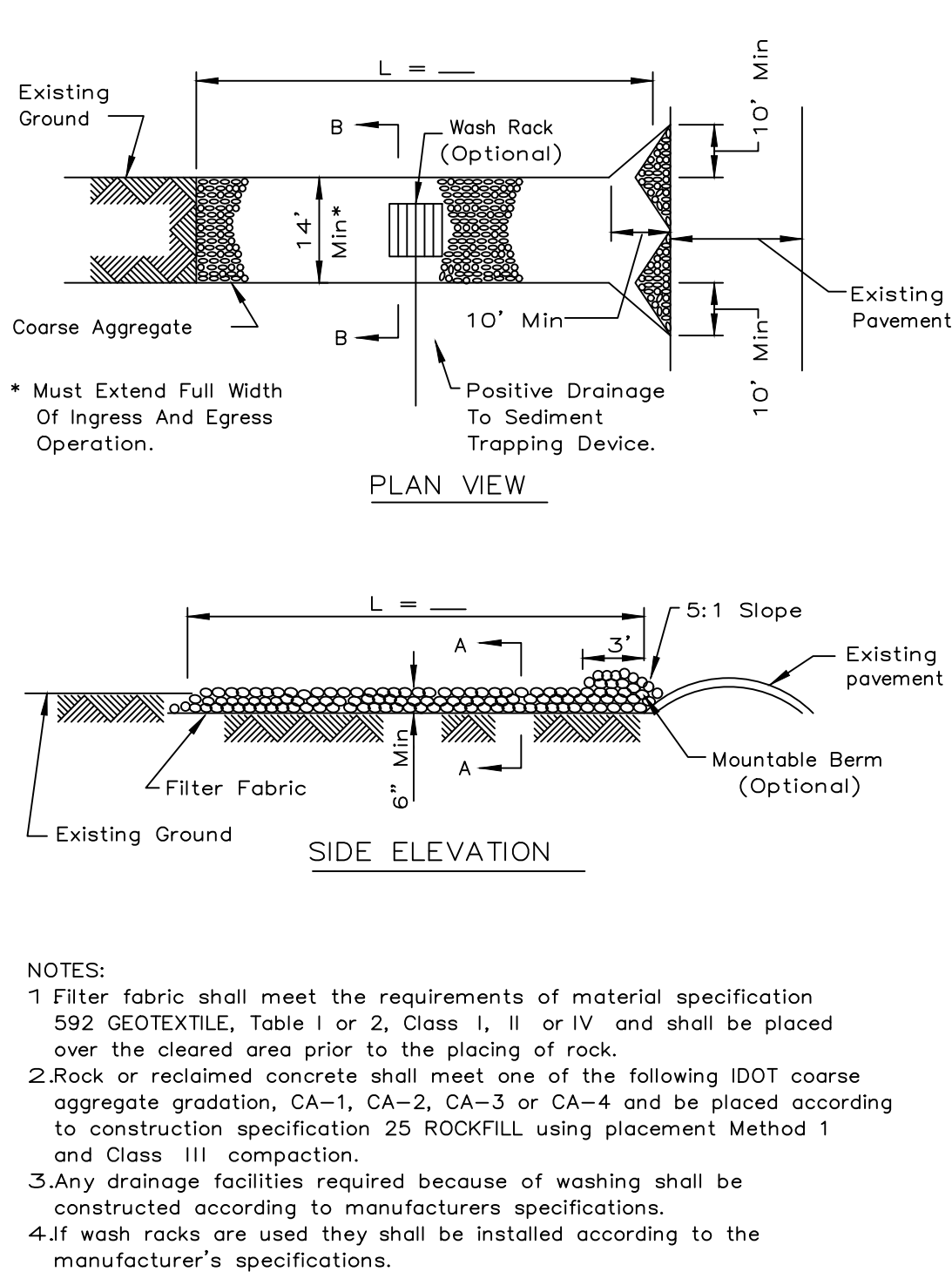


- NOTES:
- Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and/or slurry and returning the facilities to a functional condition.
 - Facility shall be cleaned or reconstructed in a new area once washout becomes two-thirds full.

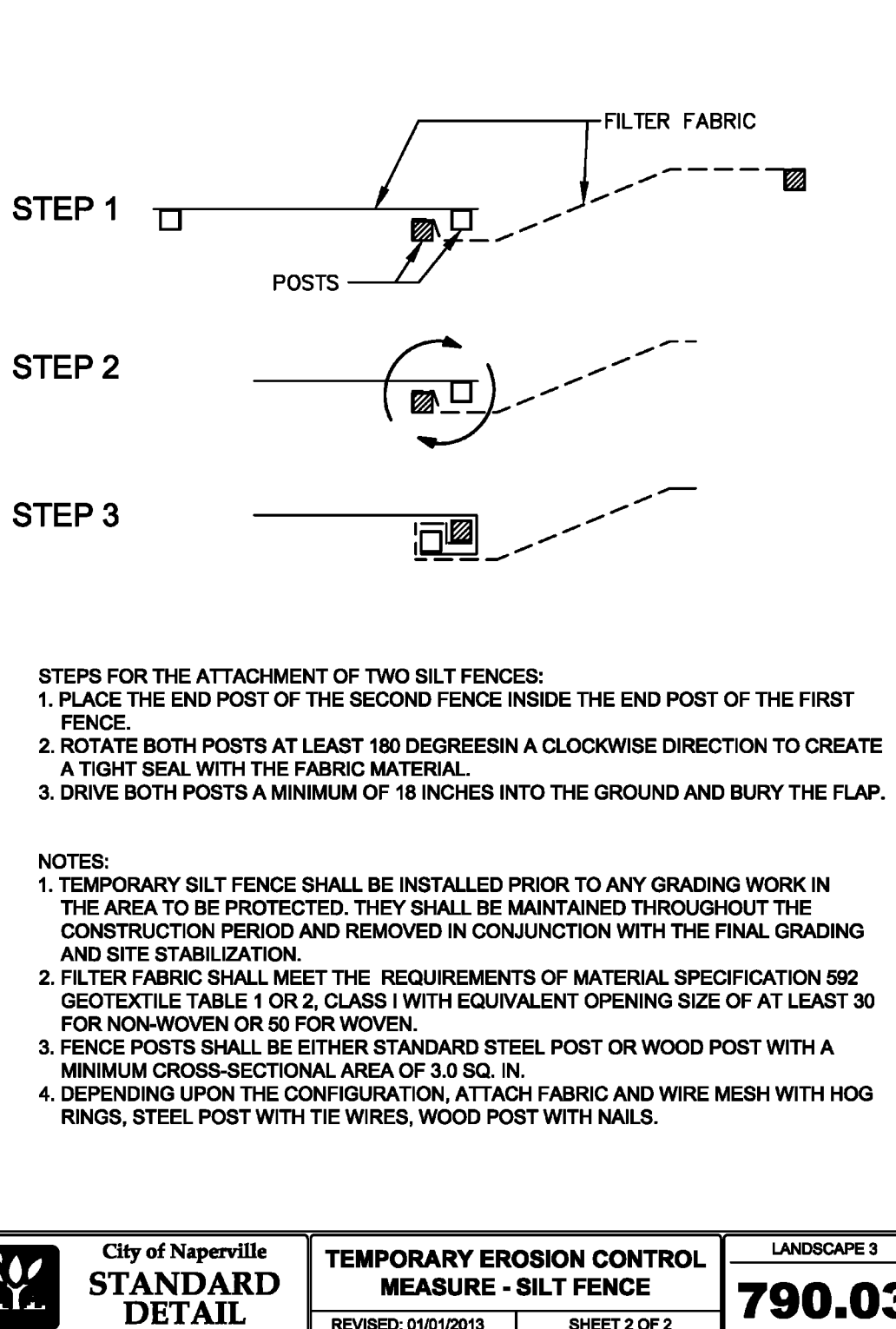
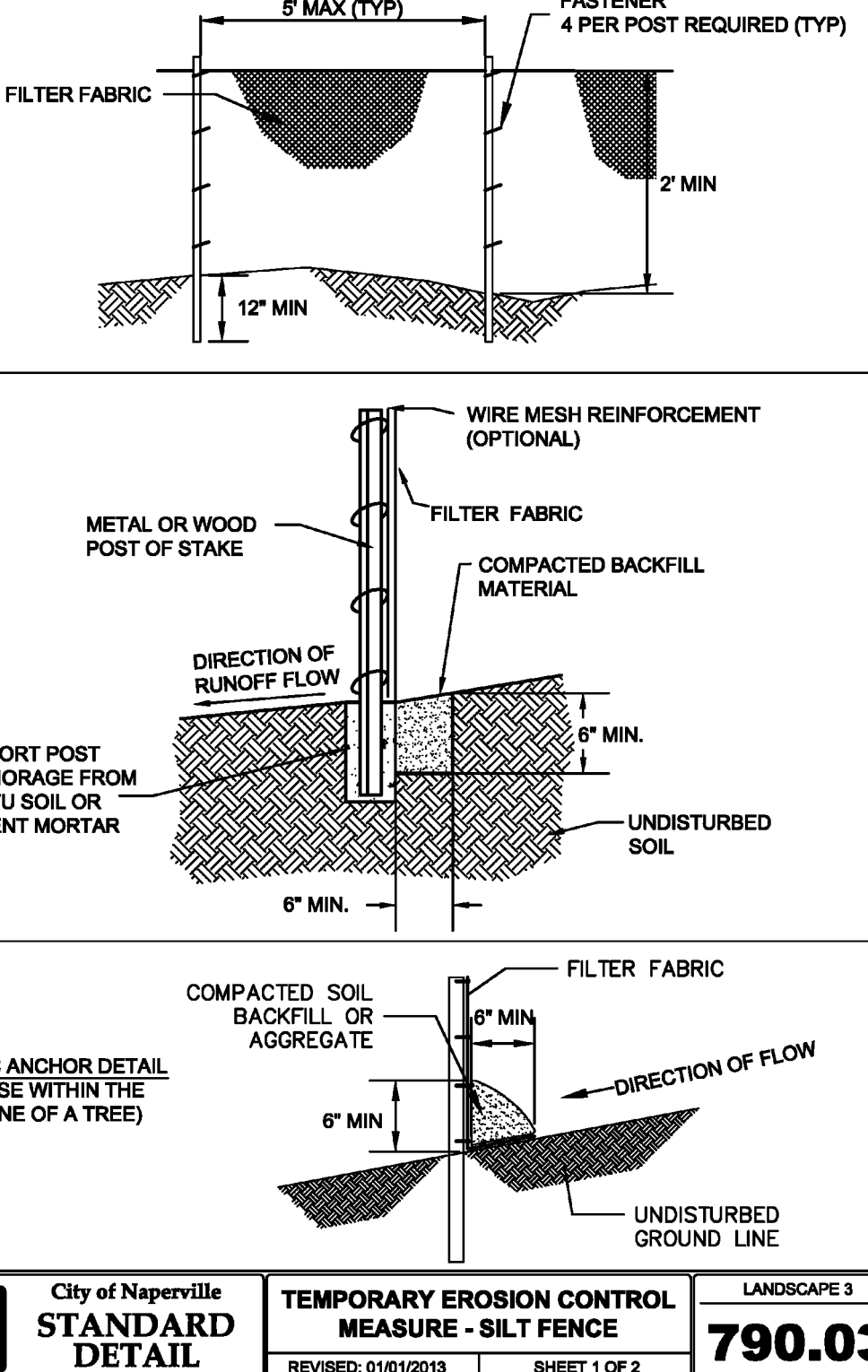
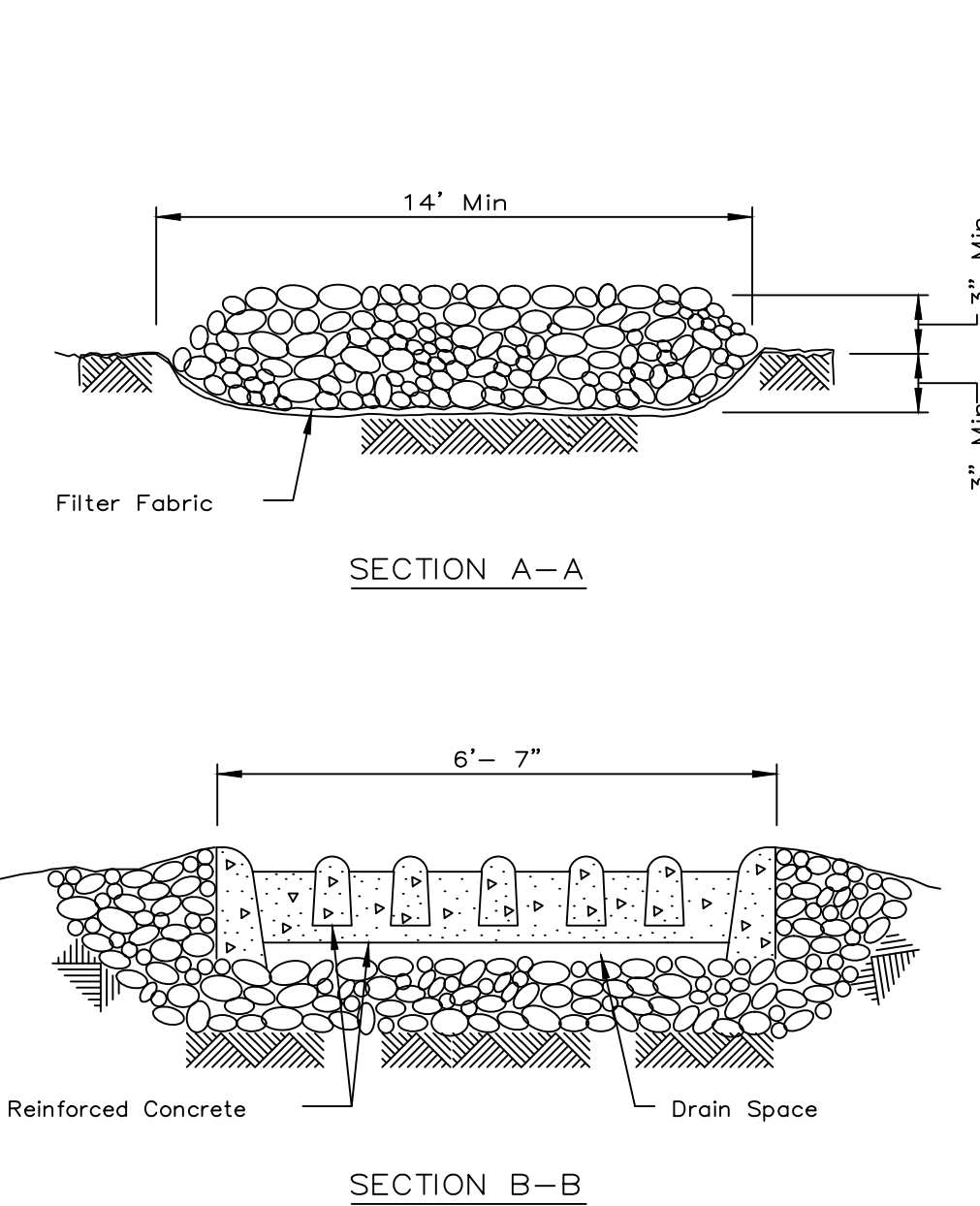
ROLLED EROSION CONTROL PRODUCTS



STABILIZED CONSTRUCTION ENTRANCE PLAN

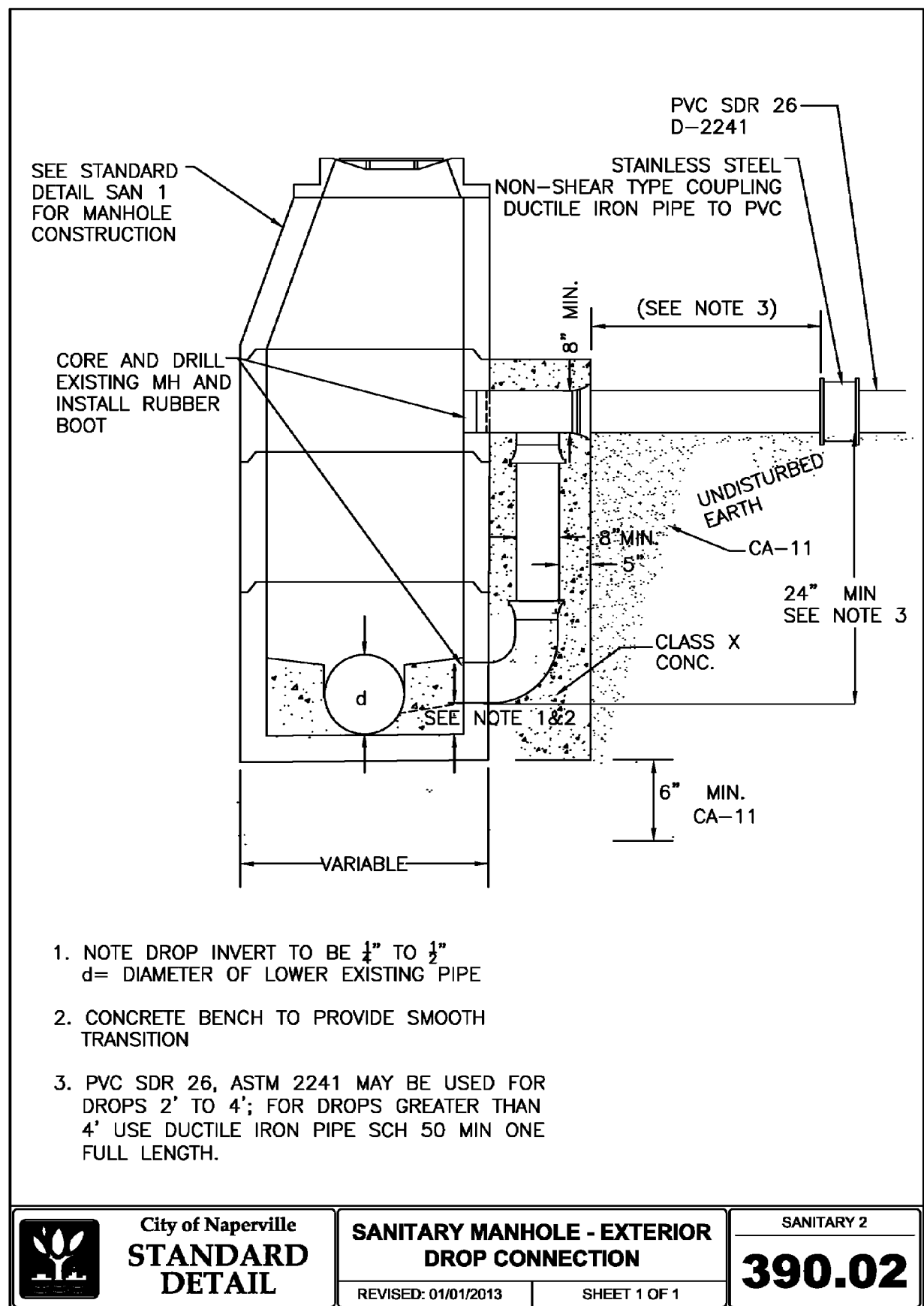
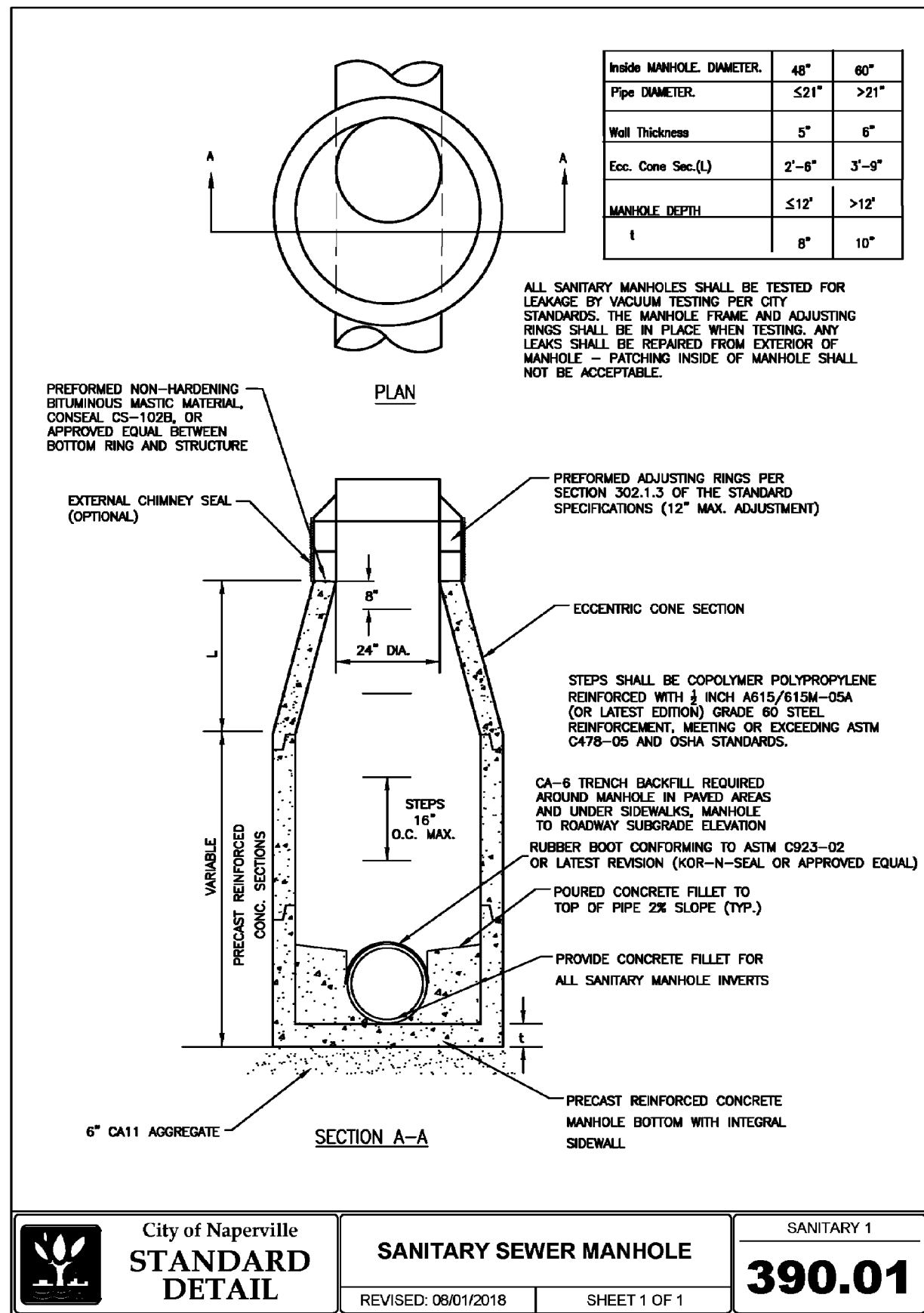
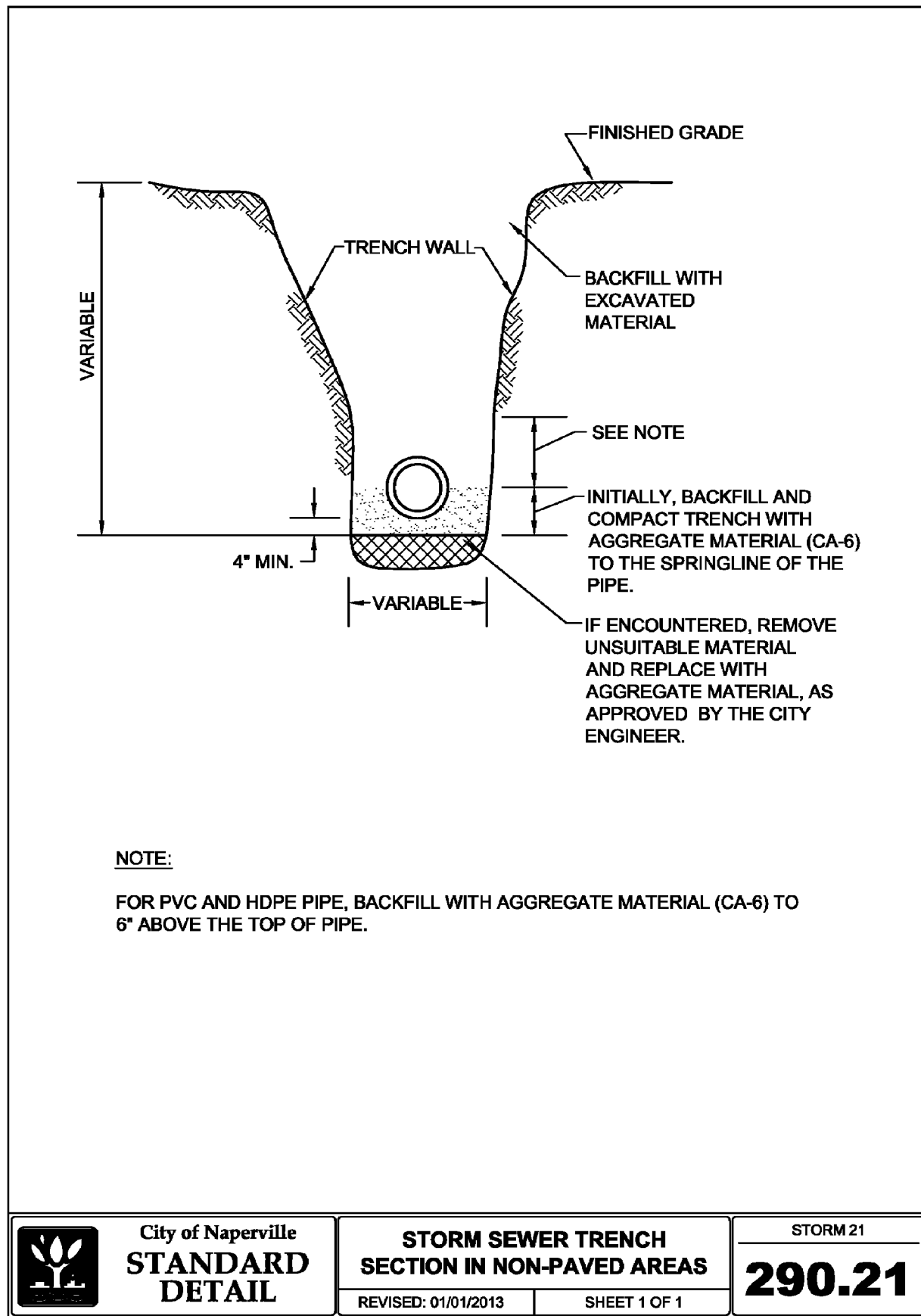
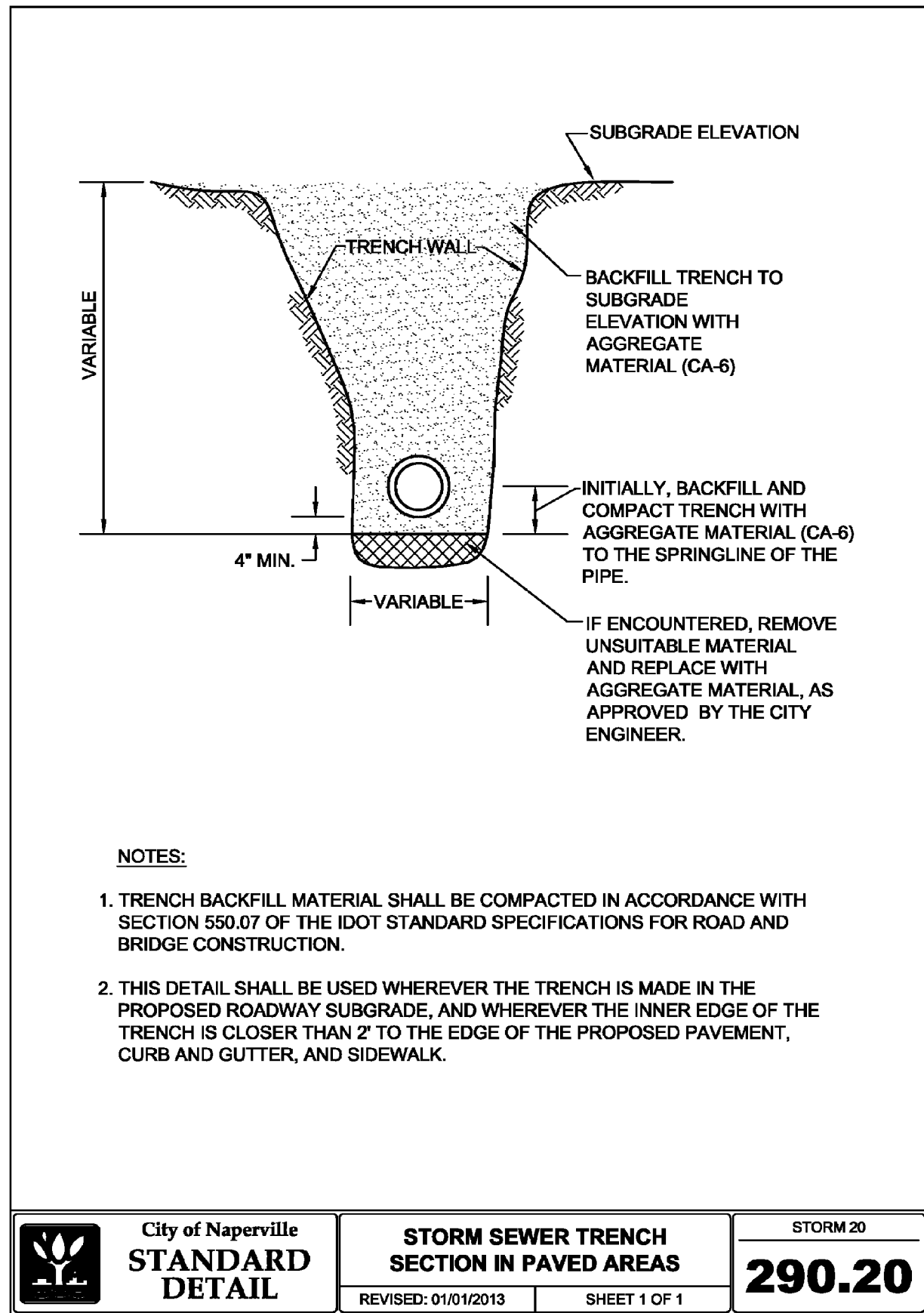
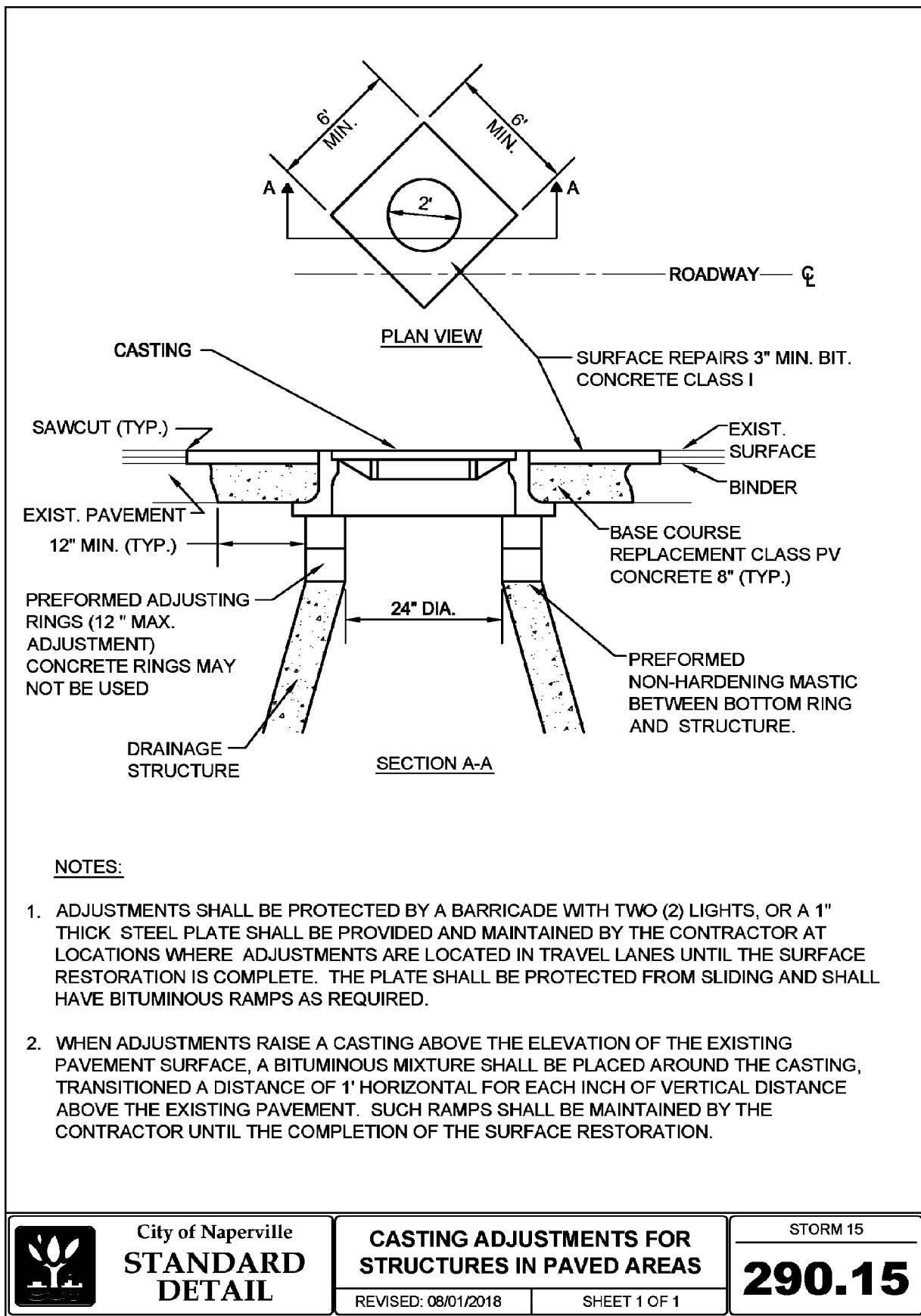
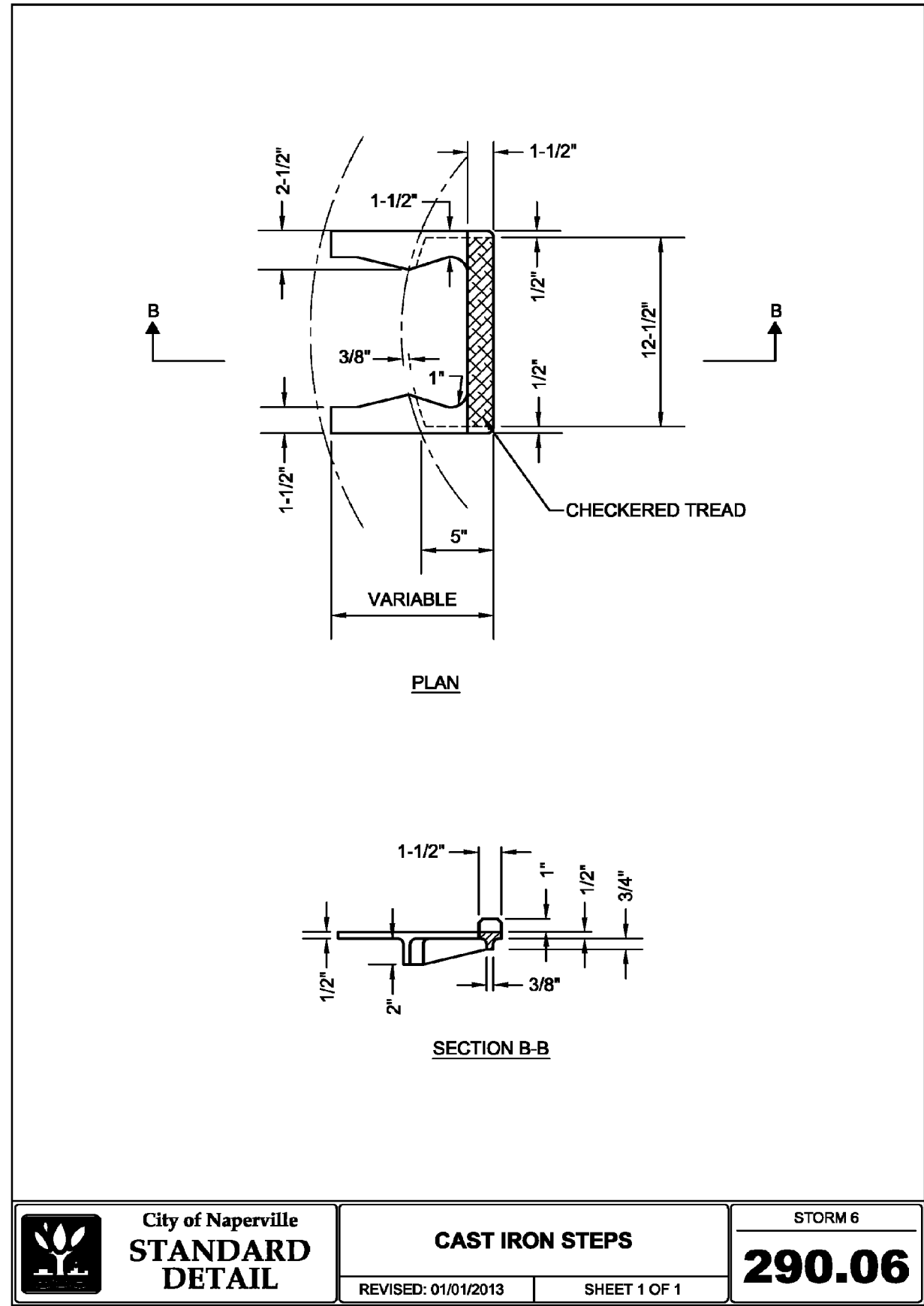
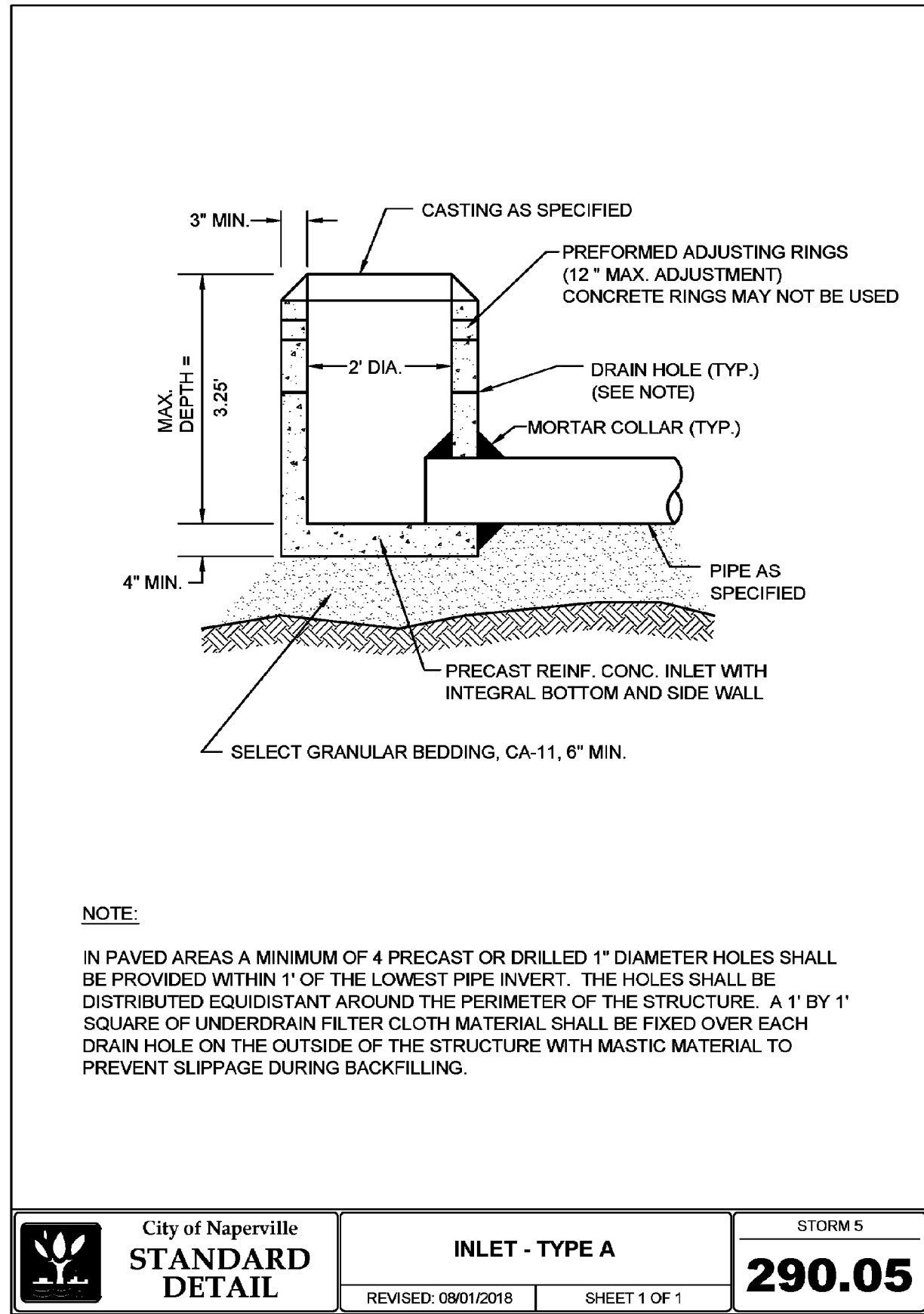
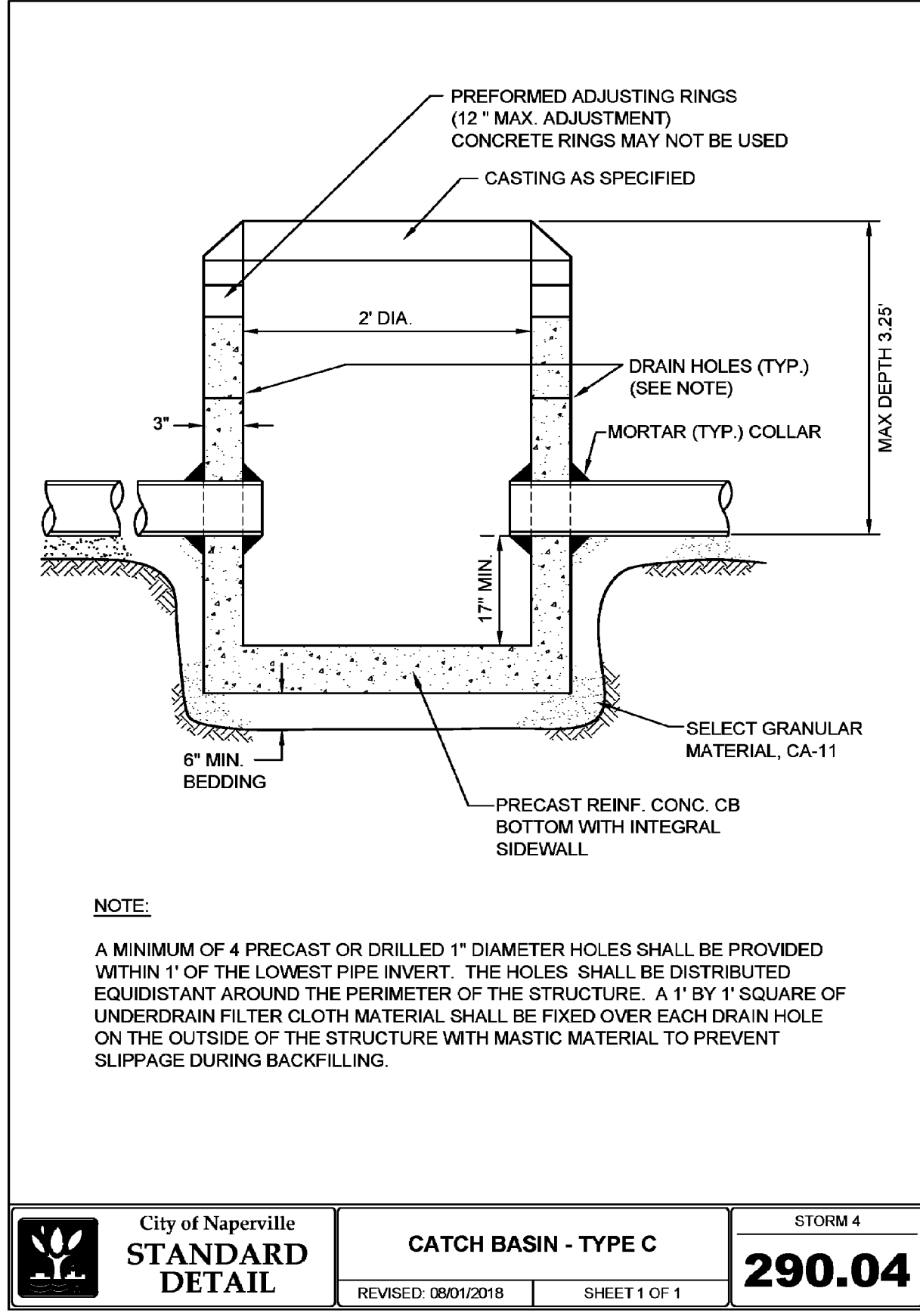
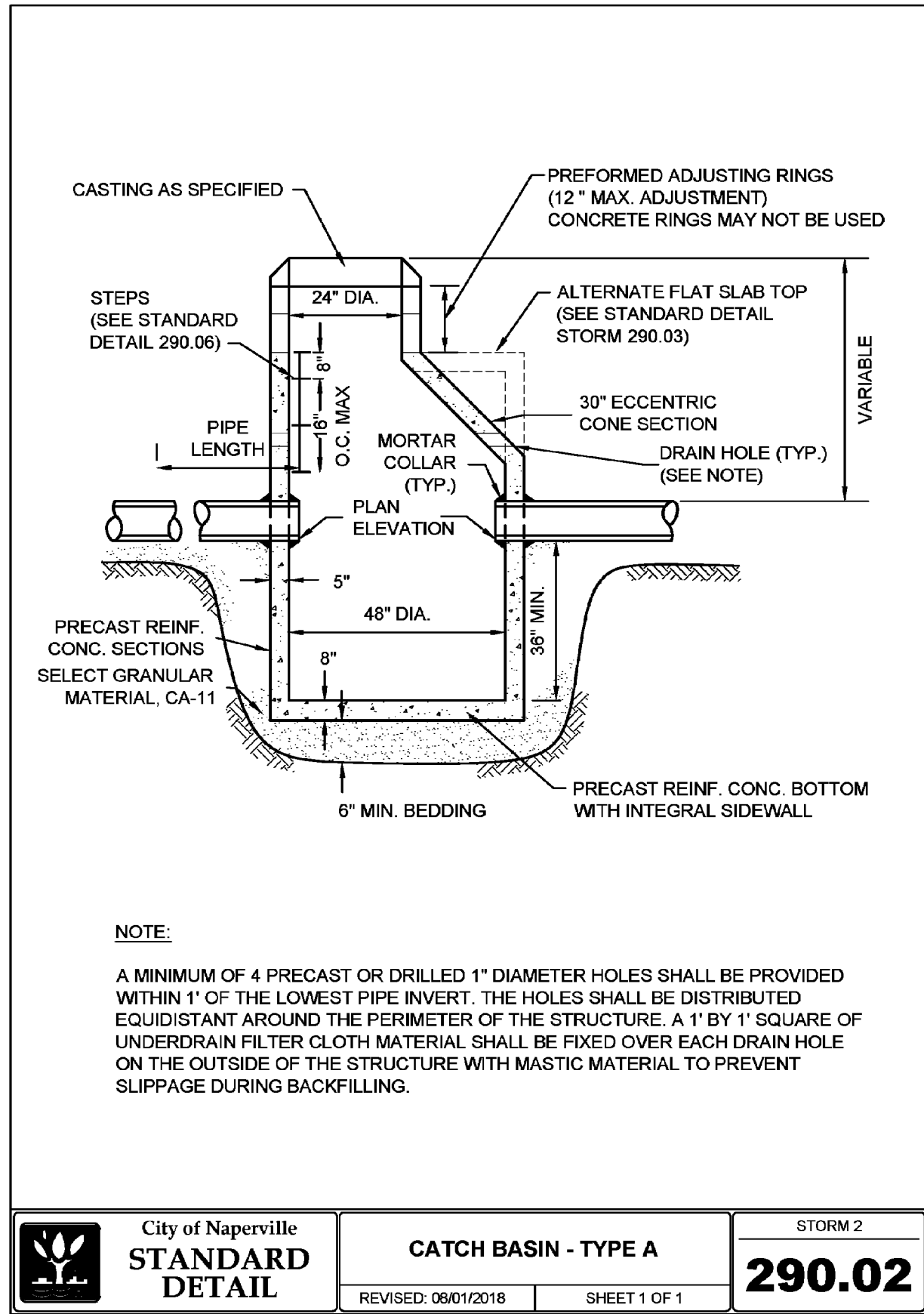
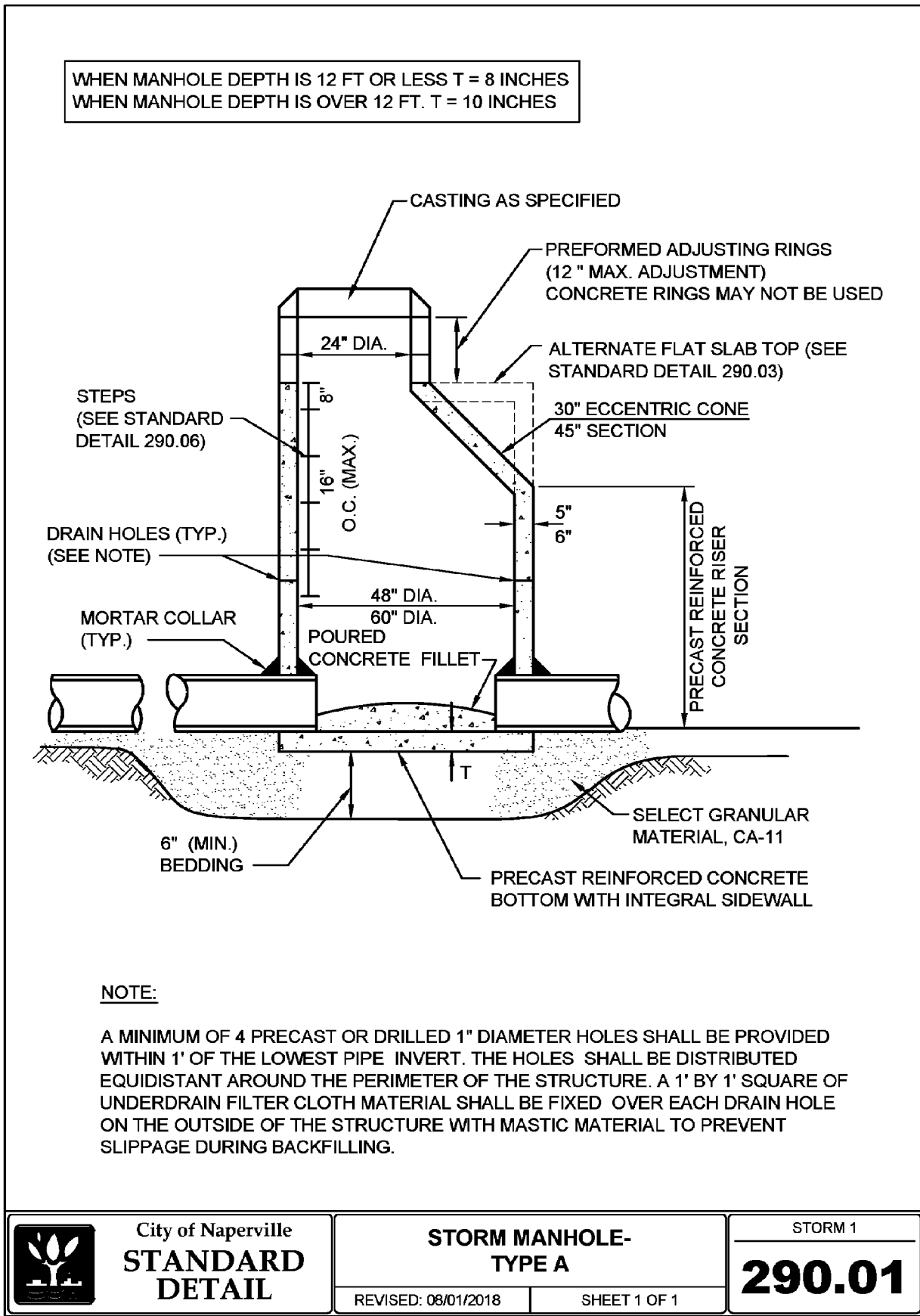


STABILIZED CONSTRUCTION ENTRANCE PLAN



REVISIONS			REVISIONS		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

STANDARD DETAIL			STANDARD DETAIL		
City of Naperville	TEMPORARY EROSION CONTROL MEASURE - SILT FENCE	LANDSCAPE 3	City of Naperville	TEMPORARY EROSION CONTROL MEASURE - SILT FENCE	LANDSCAPE 3
REVISED: 01/01/2013	SHEET 1 OF 2	790.03	REVISED: 01/01/2013	SHEET 2 OF 2	790.03
THE SHOPPES ON WASHINGTON					
STORMWATER POLLUTION PREVENTION PLAN - DETAILS					
DRN./CKD. BY: SRH/JGC	FILE: 8534SWPPP-DETAILS	FLD. BK./PG.: 273/38-39	SHEET NO. 12 OF 18		
SCALE: NONE	DATE: 04/22/19	JOB NO.: 190-206			



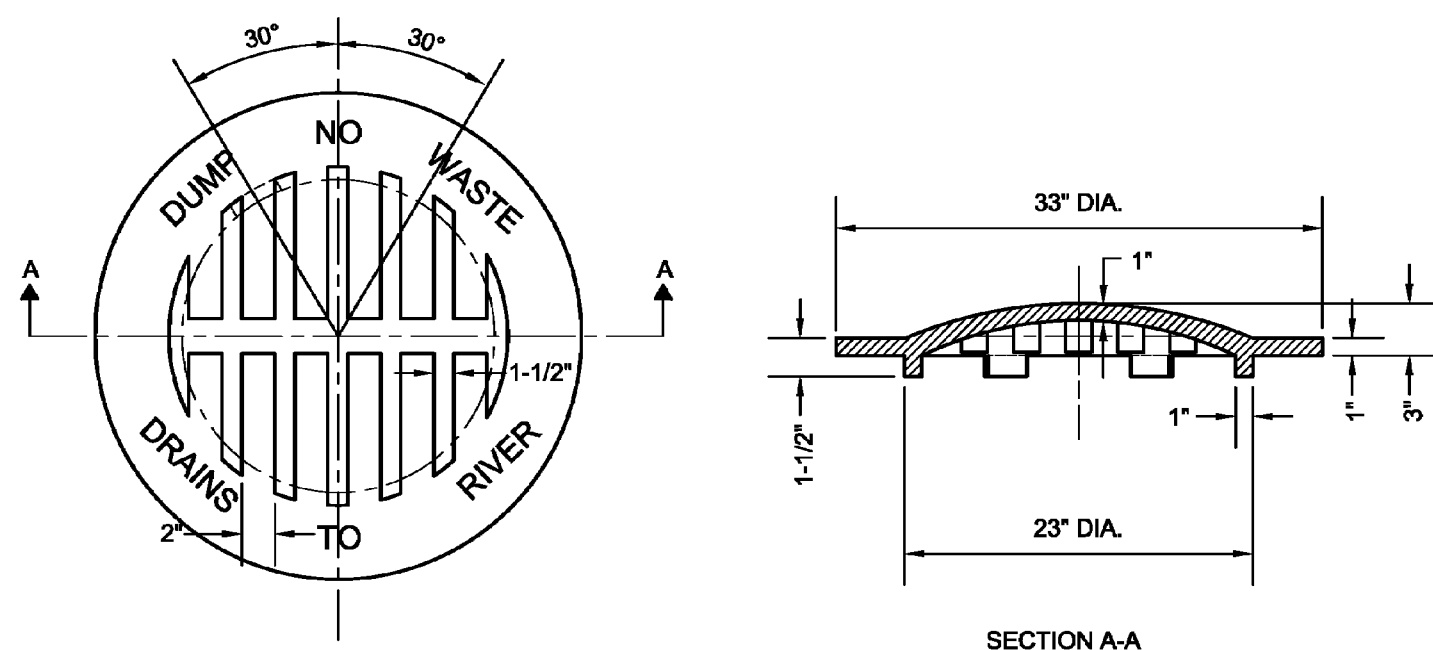
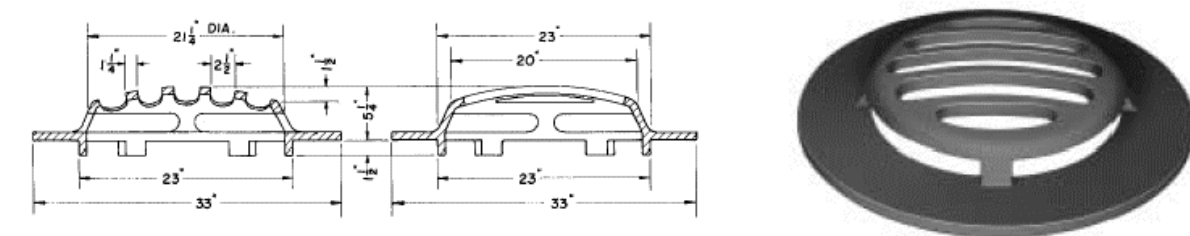
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REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

R-4342
Ditch Grate, Stool Type

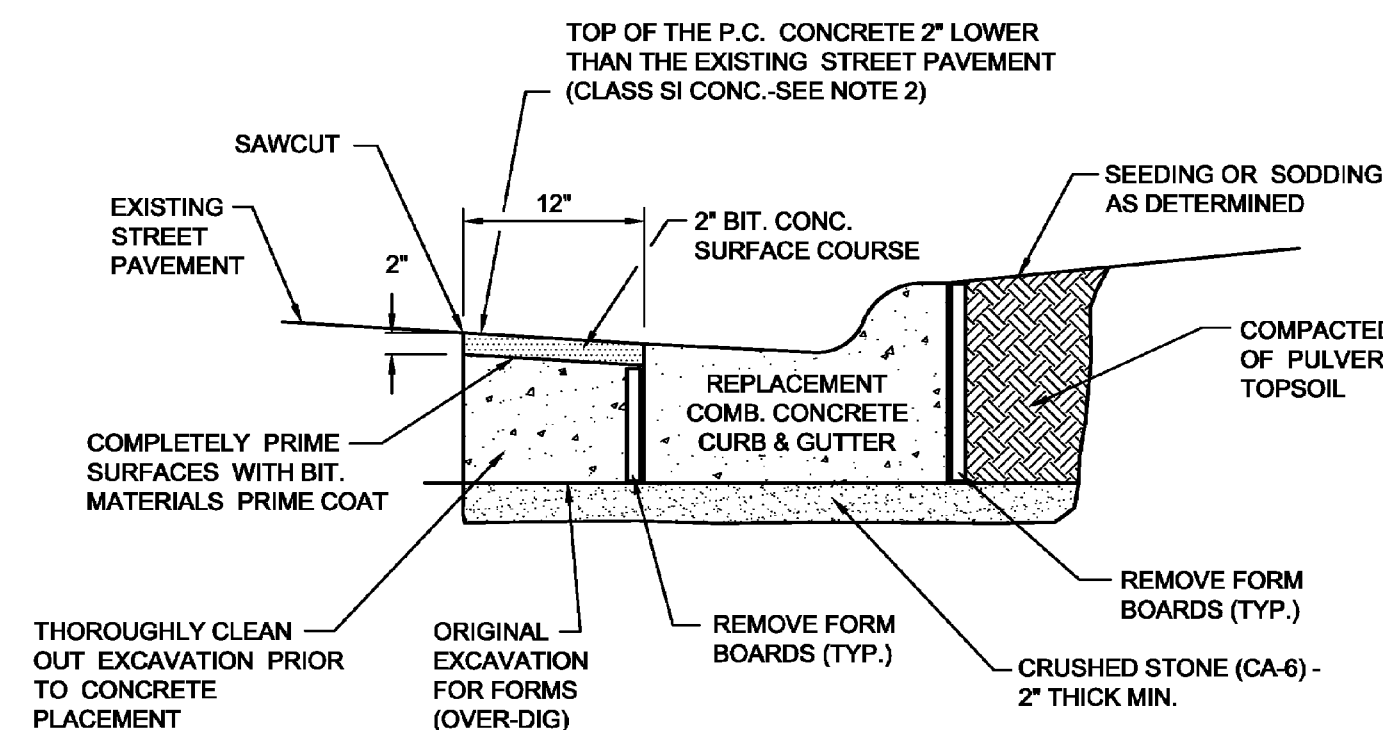
Light Duty



NOTES:


1. BEEHIVE GRATE SHALL BE NEENAH R4340B, EAST JORDAN 6527, OR EQUAL APPROVED BY THE CITY ENGINEER.
2. ALL CASTINGS SHALL BE SHOP PAINTED WITH AN ASPHALTIC BASE PAINT.
3. ALL CASTINGS SHALL INCLUDE "DUMP NO WASTE. DRAINS TO RIVER".

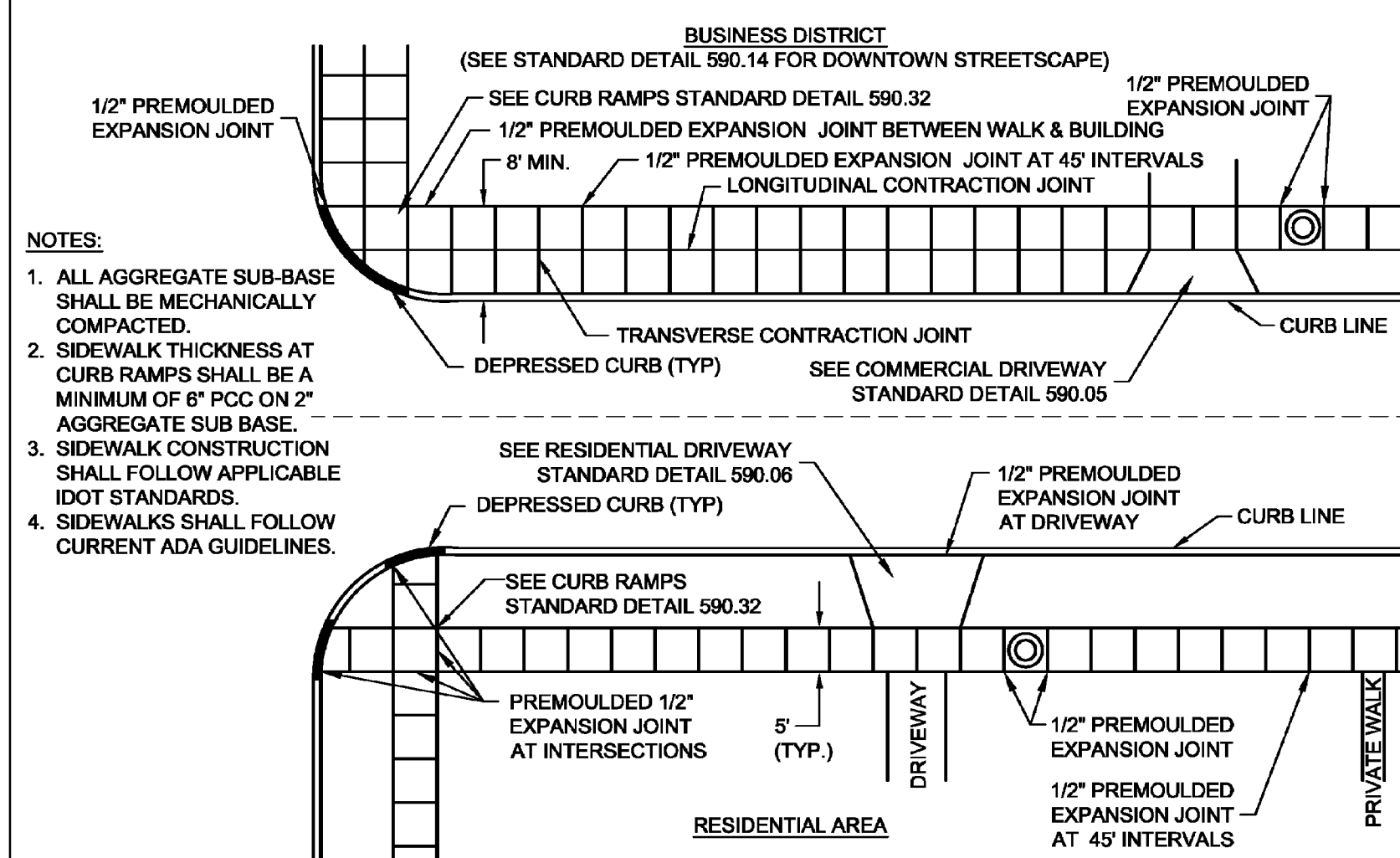
	City of Naperville STANDARD DETAIL	BEEHIVE GRATE		STORM 14
		REVISED: 05/15/2015	SHEET 1 OF 1	290.14



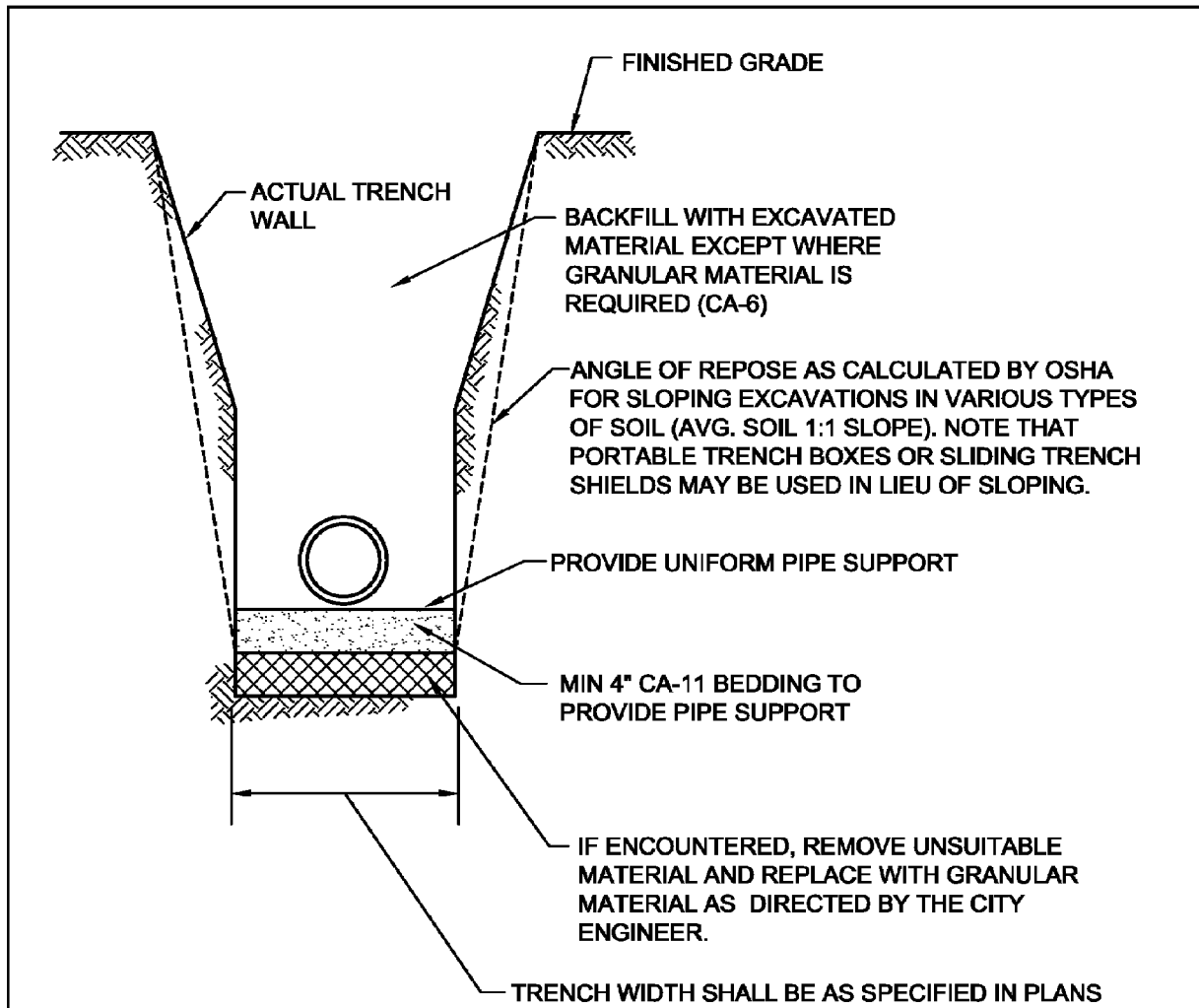
NOTES:

1. THE COMPLETE REPAIR OF PAVEMENTS ADJACENT TO THE REPLACEMENT CONCRETE CURB AND GUTTER IS INCLUDED IN THE COST OF THE NEW CURB AND GUTTER.
2. CLASS SI CONCRETE SHALL BE POURED SEPARATELY FROM THE CURB ONCE THE FORM BOARDS HAVE BEEN REMOVED.

	City of Naperville STANDARD DETAIL	CURB REPLACEMENT		PAVEMENT 24
		REVISED: 05/15/2015	SHEET 1 OF 1	590.24



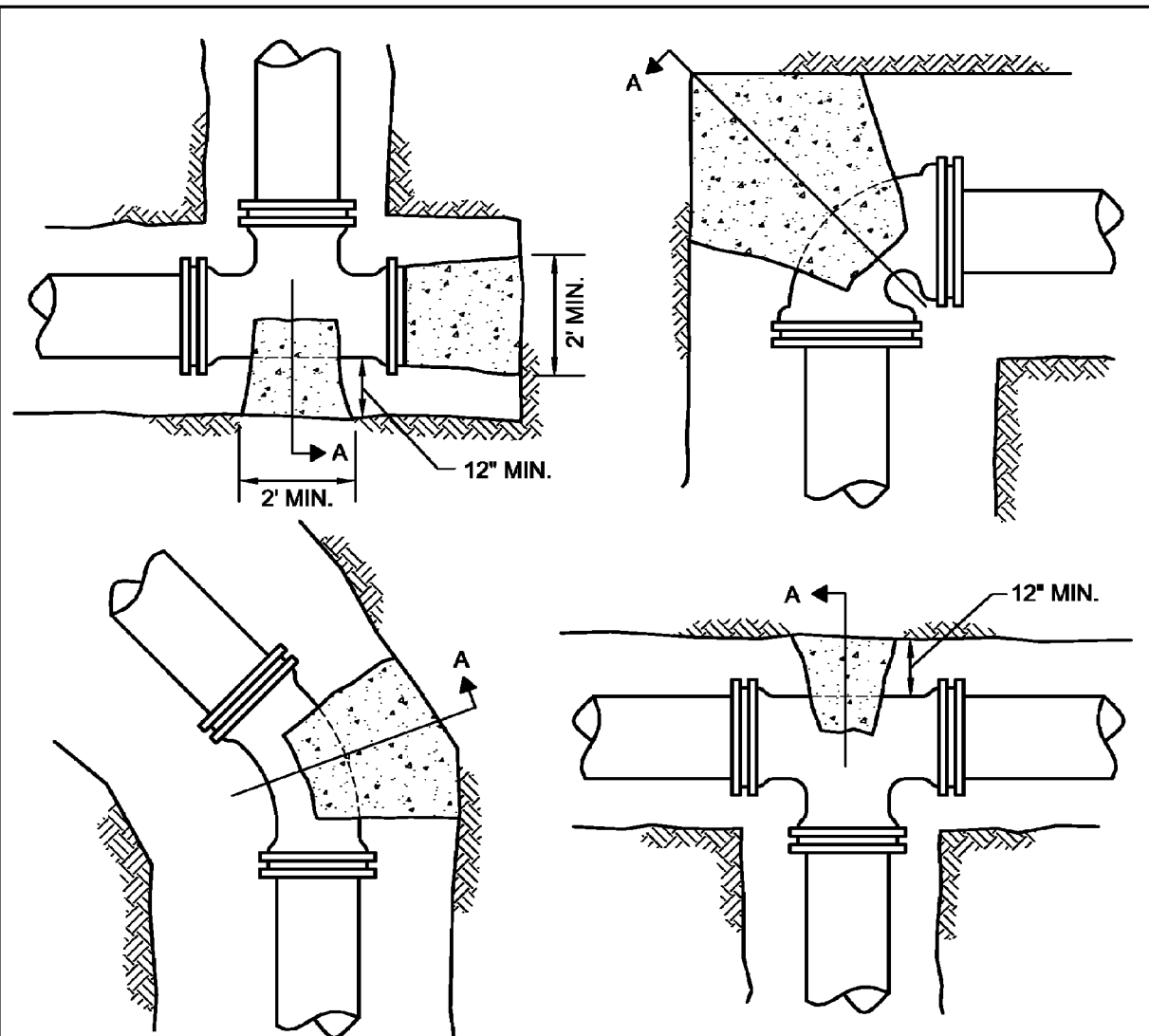
	City of Naperville STANDARD DETAIL	SIDEWALK CONSTRUCTION		PAVEMENT 31
		REVISED: 01/01/2013	SHEET 1 OF 1	590.31




NOTES:

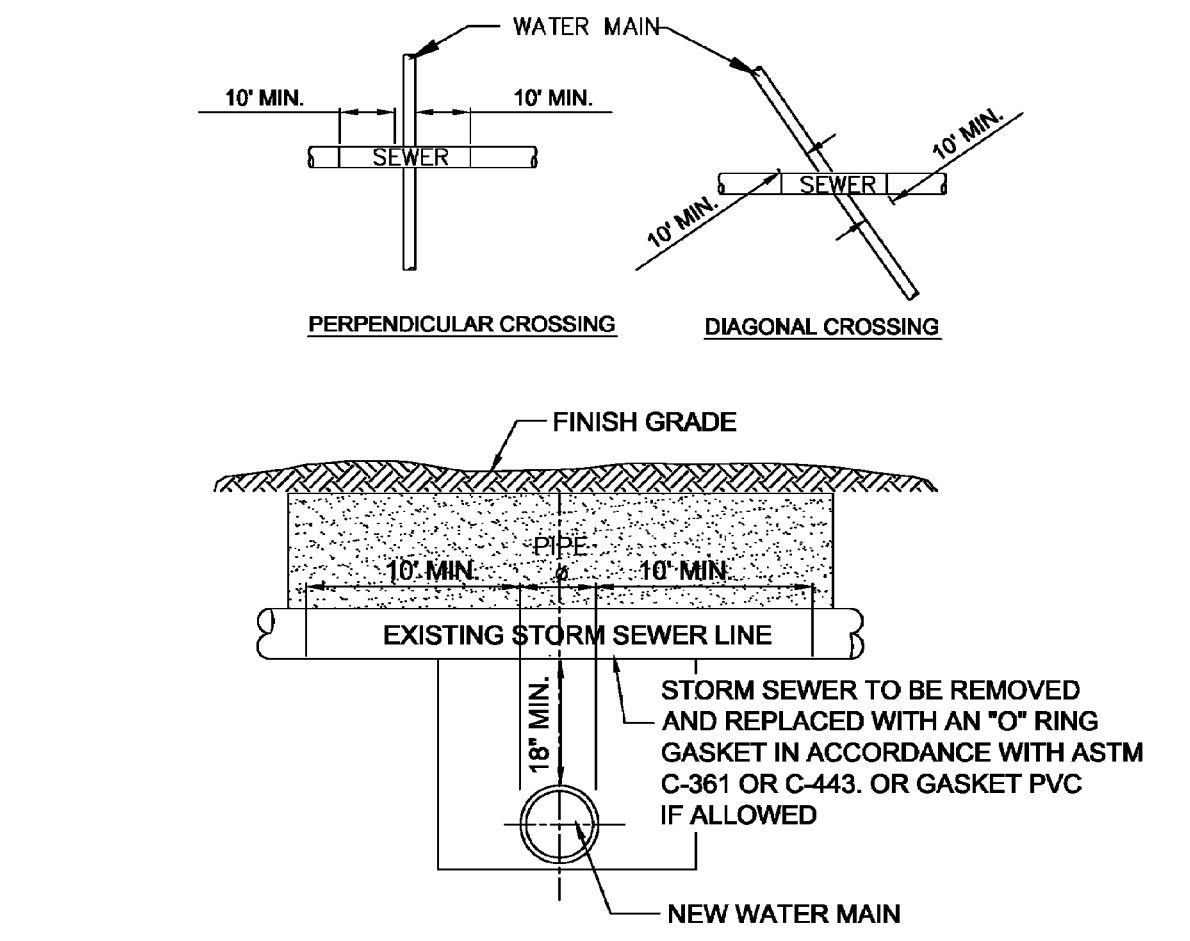
1. IN PAVED AREAS ALL TRENCHES SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 550.07 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. METHOD 1. 95% MINIMUM STANDARD PROCTOR.
2. DUCTILE IRON WATER MAIN TO BE CLASS 52. ALL DUCTILE IRON PIPE IS TO BE ENCASED IN POLYETHYLENE FILM. POLYETHYLENE ENCASEMENT TO BE INSTALLED IN ACCORDANCE WITH AWWAC105A21.5-99 (OR LATEST EDITION)
3. STAINLESS STEEL NUTS, BOLTS/T-BOLTS, AND WASHERS, TYPE 304 OR BETTER, WILL BE REQUIRED ON ALL WATER MAIN INSTALLATIONS. THIS WOULD APPLY TO HYDRANTS, TAPPING SLEEVES, VALVES, FITTINGS, RESTRAINT, AND OTHER APPURTENANCES BURIED OR IN VALVE VAULTS. MECHANICAL JOINTS AND RESTRAINT GLANDS REQUIRE 304 STAINLESS STEEL T-BOLTS. AN ANTI-SEIZE COMPOUND SHALL BE FACTORY APPLIED TO NUTS OR BOLTS - ANY DAMAGE TO THIS COATING SHALL BE REPAIRED WITH FIELD-APPLIED, APPROVED ANTI-SEIZE COMPOUND THAT IS A MOLYBDENUM-BASE LUBRICANT, BOSTIK NEVER-SEIZ OR APPROVED EQUAL.

	City of Naperville STANDARD DETAIL	WATER MAIN TRENCH SECTION		WATER 10
		REVISED: 01/01/2013	SHEET 1 OF 1	490.10



1. THRUST BLOCKING TO PREVENT MOVEMENT OF LINES UNDER PRESSURE AT BENDS, TEES, CAPS, VALVES, HYDRANTS, & AT POINTS SPECIFIED BY THE ENGINEER SHALL BE CLASS "SI".
2. CONCRETE A MINIMUM OF 12" THICK, PLACED BETWEEN SOLID GROUND & THE FITTING, AND SHALL BE ANCHORED IN SUCH A MANNER THAT THE PIPE AND FITTING WILL BE ACCESSIBLE FOR REPAIRS.
3. THRUST BLOCKS SHALL BE PLACED AT BENDS OF 11-1/4" OR MORE.
4. PIPE BENDS TO BE POLYETHYLENE ENCASED.
5. JOINT RESTRAINT AT BEND AND LENGTH OF PIPE EACH DIRECTION FROM BENDS AS REQUIRED BY THE CITY OF NAPERVILLE IF UNDISTURBED SOIL NOT AVAILABLE.
6. THRUST BLOCK FOR PIPES LARGER THAN 12" MUST BE POURED IN PLACE

	City of Naperville STANDARD DETAIL	THRUST BLOCK		WATER 11
		REVISED: 05/15/2015	SHEET 1 OF 1	490.11




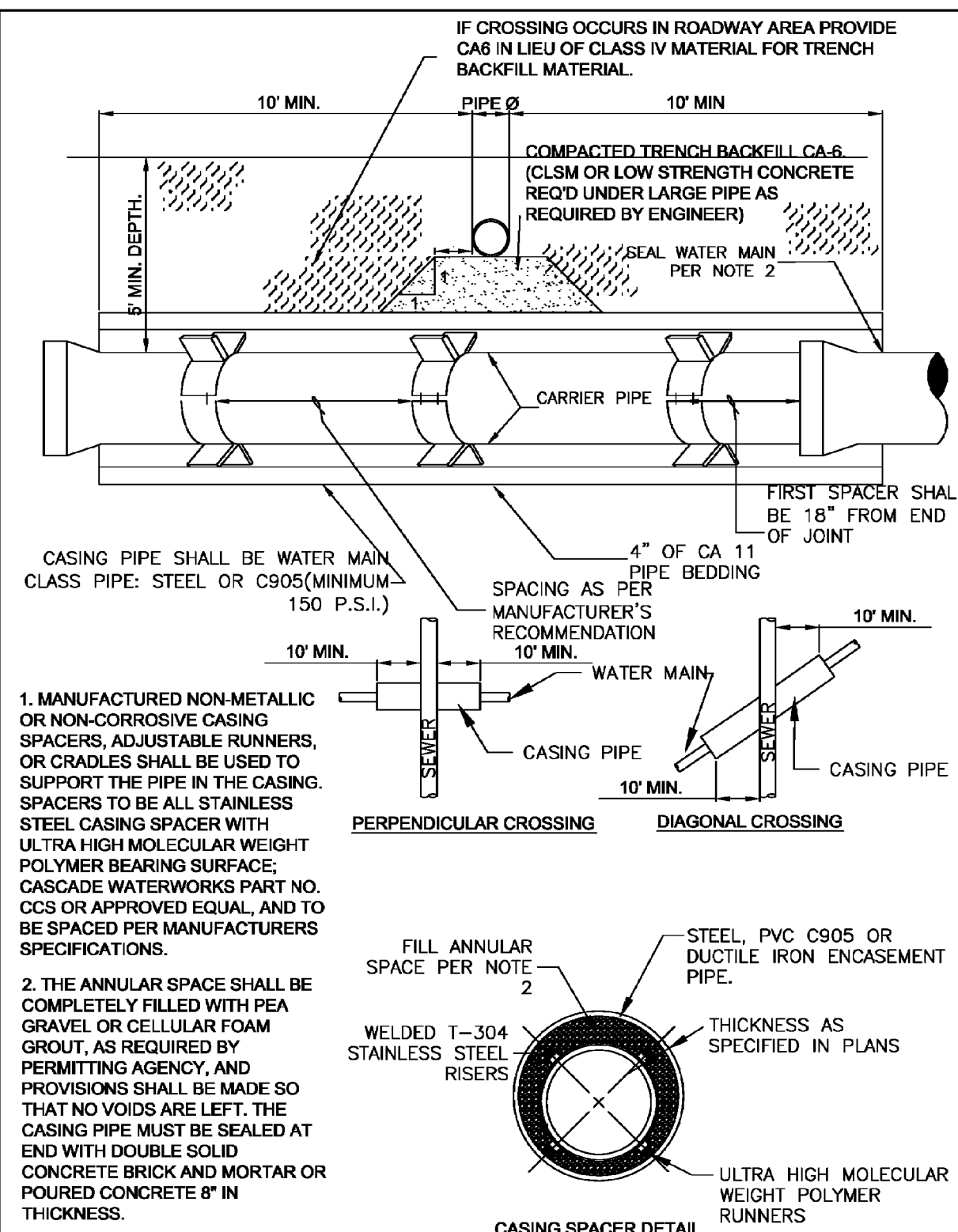
NOTE:
NEW STORM SEWER INSTALLATION SHALL BE GASKETED STRUCTURE TO STRUCTURE

	City of Naperville STANDARD DETAIL	WATER MAIN PROTECTION FROM EXISTING STORM SEWER PIPE		WATER 14
		REVISED: 01/01/2013	SHEET 1 OF 1	490.14

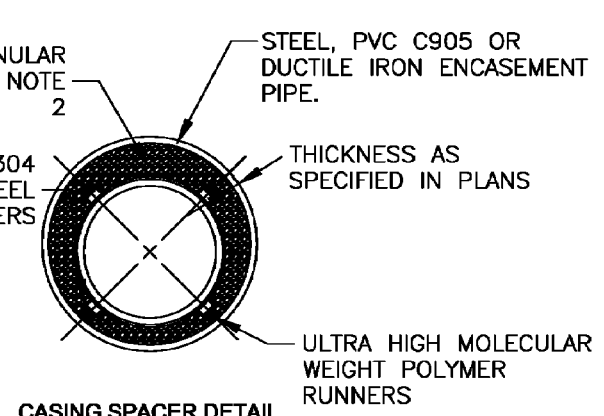


1. COVER BENDS, REDUCERS AND OTHER PIPE-SHAPED APPURTENANCES WITH POLYETHYLENE IN THE SAME MANNER AS THE PIPE.
2. WRAP VALVES, TEES AND OTHER ODD-SHAPED APPURTENANCES WITH A FLAT SHEET OR SPLT LENGTH OF POLYETHYLENE TUBE BY PASSING THE SHEET UNDER THE APPURTENANCES AND BRINGING IT UP AROUND THE BODY. MAKE SEAMS BY BRINGING THE EDGES OF THE POLYETHYLENE SHEET TOGETHER, FOLDING OVER TWICE, AND TAPING DOWN.
3. POLYETHYLENE ENCASEMENT TO BE IN ACCORDANCE WITH A.W.W.A. C105-99OR LATEST VERSION.
4. COPPER SERVICE TAPS ARE TO BE WRAPPED WITH POLYETHYLENE OR A SUITABLE DIELECTRIC APE FOR A MINIMUM CLEAR DISTANCE OF 3' AWAY FROM THE MAIN.

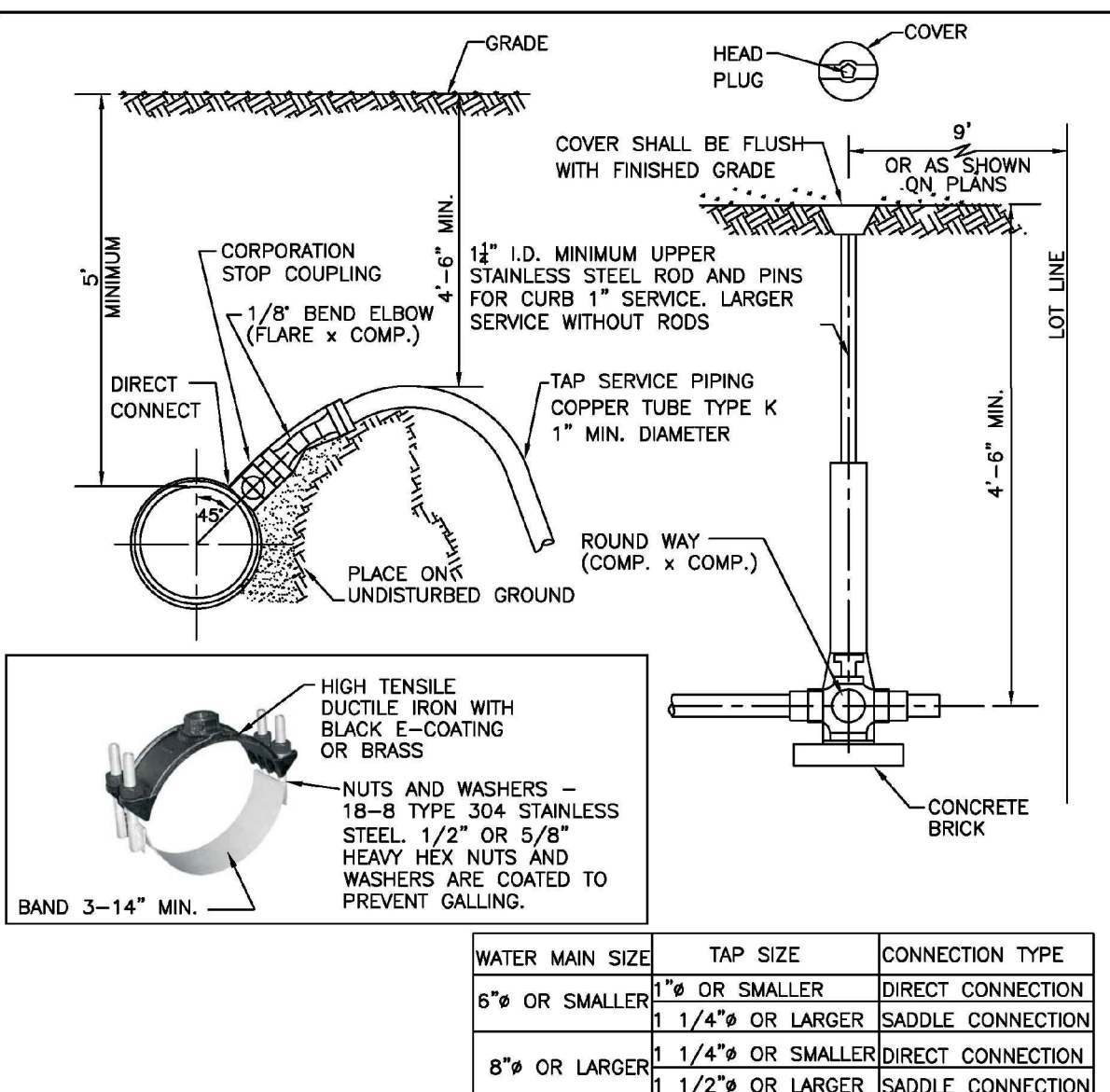
	City of Naperville STANDARD DETAIL	POLYETHYLENE ENCASEMENT		WATER 15
		REVISED: 01/01/2013	SHEET 1 OF 1	490.15



1. MANUFACTURED NON-METALLIC OR NON-CORROSIVE CASING SPACERS, ADJUSTABLE RUNNERS, OR CRADLES SHALL BE USED TO SUPPORT THE PIPE IN THE CASING. SPACERS TO BE ALL STAINLESS STEEL CASING SPACER WITH ULTRA HIGH MOLECULAR WEIGHT POLYMER BEARING SURFACE. CASCADE WATERWORKS PART NO. CCS OR APPROVED EQUAL, AND TO BE SPACED PER MANUFACTURERS SPECIFICATIONS.
2. THE ANNUAL SPACE SHALL BE COMPLETELY FILLED WITH PE GRAVEL OR CELLULAR FOAM GROUT, AS REQUIRED BY PERMITTING AGENCY, AND PROVISIONS SHALL BE MADE SO THAT NO VOIDS ARE LEFT. THE CASING PIPE MUST BE SEALED AT END WITH DOUBLE SOLID CONCRETE BRICK AND MORTAR OR POURED CONCRETE 8" IN THICKNESS.




	City of Naperville STANDARD DETAIL	WATER MAIN CASING PIPE		WATER 16
		REVISED: 01/01/2013	SHEET 1 OF 1	490.16



WATER MAIN SIZE	TAP SIZE	CONNECTION TYPE
6"	1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
8"	3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
10"	1"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
12"	1 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
14"	1 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
16"	1 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
18"	2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
20"	2 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
22"	2 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
24"	2 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
26"	3"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
28"	3 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
30"	3 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
32"	3 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
34"	4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
36"	4 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
38"	4 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
40"	4 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
42"	5"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
44"	5 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
46"	5 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
48"	5 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
50"	6"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
52"	6 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
54"	6 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
56"	6 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
58"	7"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
60"	7 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
62"	7 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
64"	7 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
66"	8"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
68"	8 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
70"	8 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
72"	8 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
74"	9"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
76"	9 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
78"	9 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
80"	9 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
82"	10"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
84"	10 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
86"	10 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
88"	10 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
90"	11"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
92"	11 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
94"	11 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
96"	11 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
98"	12"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
100"	12 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
102"	12 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
104"	12 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
106"	13"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
108"	13 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
110"	13 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
112"	13 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
114"	14"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
116"	14 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
118"	14 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
120"	14 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
122"	15"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
124"	15 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
126"	15 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
128"	15 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
130"	16"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
132"	16 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
134"	16 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
136"	16 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
138"	17"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
140"	17 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
142"	17 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
144"	17 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
146"	18"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
148"	18 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
150"	18 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
152"	18 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
154"	19"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
156"	19 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
158"	19 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
160"	19 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
162"	20"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
164"	20 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
166"	20 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
168"	20 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
170"	21"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
172"	21 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
174"	21 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
176"	21 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
178"	22"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
180"	22 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
182"	22 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
184"	22 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
186"	23"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
188"	23 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
190"	23 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
192"	23 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
194"	24"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
196"	24 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
198"	24 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
200"	24 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
202"	25"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
204"	25 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
206"	25 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
208"	25 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
210"	26"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
212"	26 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
214"	26 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
216"	26 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
218"	27"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
220"	27 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
222"	27 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
224"	27 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
226"	28"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
228"	28 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
230"	28 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
232"	28 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
234"	29"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
236"	29 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
238"	29 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
240"	29 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
242"	30"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
244"	30 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
246"	30 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
248"	30 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
250"	31"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
252"	31 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
254"	31 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
256"	31 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
258"	32"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
260"	32 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
262"	32 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
264"	32 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
266"	33"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
268"	33 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
270"	33 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
272"	33 3/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
274"	34"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
276"	34 1/4"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L404, OR AN APPROVED EQUAL BY MUELLER, OR A.Y. McDONALD (NOT AVAILABLE IN 1" SIZE) SEE NOTE 1.)
278"	34 1/2"	1/2" BEND ELBOW - FEMALE FLANG TO COMPRESSION; FORD L40

- NOTES:
1. CORPORATION IS TO BE FLARING TYPE (FORD F-600 OR EQUAL BY MUELLER OR A.Y. McDONALD), FOR SERVICE SIZE 1 1/2\"/>
 2. 1/2\"/>
 3. CURB BOX IS ARCH PATTERN WITH 1-1/4\"/>
 4. CURB STOP IS WITH COMPRESSION COUPLING - FORD B44 CURB STOP, OR EQUAL BY MUELLER, OR A.Y. McDONALD.
 5. B-BOX HAS 1\"/>
 6. CORPORATION STOPS SHALL BE INSTALLED A MINIMUM OF 18\"/>
 7. WATER SERVICE LINE SMALLER THAN 7\"/>
 8. SERVICE TAPS SHALL REQUIRE SADDLES IN ACCORDANCE WITH CHART BELOW. SADDLES SHALL BE STAINLESS STEEL, DUAL BENDED, DUCTILE IRON OR BRASS SADDLE (FORD F5202, 2020S OR APPROVED EQUAL). REQ'D FOR TAPS.
 9. ALL WATERMAIN AND APPURTENANCES MUST COMPLY WITH SECTION 1417 (A)(1) OF THE SAFER DRINKING WATER ACT (SDWA). ALL PRODUCT USED FOR DISPENSING POTABLE WATER MUST MEET BOTH THE NSF 61 AND NSF 372 TEST OF STANDARDS VIA THIRD PARTY TESTING AND CERTIFICATIONS.

	City of Naperville STANDARD DETAIL	SERVICE TAP AND CONNECTION		WATER 20
		REVISED: 05/15/2015	SHEET 1 OF 1	490.20

REVISIONS			REVISIONS		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

THE SHOPPES ON WASHINGTON

DETAILS

DRN./CKD. BY: FWB/JGC	FILE: 8531D	FLD. BK./PG.: 273/38-39	SHEET NO. 15 OF 18
SCALE: N/A	DATE: 04/22/19	JOB NO.: 190-206	

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REVISIONS			REVISIONS		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/05/19	REV. PER CITY RVW DATED 05/16/19			

THE SHOPPES ON WASHINGTON				
DETAILS				
DRN./CKD. BY:	FWB/JGC	FILE:	8531D	FLD. BK./PG.: 273/38-39
SCALE:	N/A	DATE:	04/22/19	JOB NO.: 190-206
				SHEET NO. 17 OF 18

